bulletin Institute for the Study of the USSR

October 1957

SUPPLEMENT

Leading Positions and Personalities in the Communist Party of the Soviet Union and the Soviet Government

Recent events have brought about changes that have rendered the previous supplement out of date. The lists have now been completely revised as of November 11, 1957. The section "Changes and Appointments" appearing at the end of the *Bulletin* will provide the information needed to keep these lists up to date.

For the sake of brevity the positions on the all-union level have not been fully specified except where required for clarity. For example, Andrei A. Gromyko is Minister of Foreign Affairs of the USSR. We have omitted "of the USSR." On other levels the title is complete. Thus, Ivan G. Käbin is listed as First Secretary of the Central Committee of the Communist Party of Estonia. For further details with regard to the ministries see the note on page 14.

Again for the sake of brevity regional Party committees are referred to simply as committees. Thus, Vasily K. Klimenko, First Secretary of the Voroshilovgrad Oblast Committee of the Communist Party of the Ukraine, is listed as First Secretary of the Voroshilovgrad Oblast Committee. State planning committees are given in their most common, abbreviated form, "gosplans;" economic councils, "sovnarkhozes."

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PART I

The Communist Party of the Soviet Union

Presidium of the Central Committee

Members

ARISTOV, Averky B.
BELYAEV, Nikolai I.
BREZHNEV, Leonid I.
BULGANIN, Nikolai A.
FURTSEVA, Ekaterina A.
IGNAŢOV, Nikolai G.
KHRUSHCHEV, Nikita S.
KIRICHENKO, Alekxei I.
KOZLOV, Frol R.
KUUSINEN, Otto V.
MIKOYAN, Anastas I.
SHVERNIK, Nikolai M.
SUSLOV, Mikhail A.
VOROSHILOV, Kliment E.

Candidate Members

KALNBĒRZIŅŠ, Jan E.
KIRILENKO, Andrei P.
KOROTCHENKO, Demyan S.
KOSYGIN, Alekxei N.
MAZUROV, Kirill T.
MUKHITDINOV, Nuritdin A.
MZHAVANADZE, Vasily P.
PERVUKHIN, Mikhail G.
POSPELOV, Petr N.

Secretariat of the Central Committee

First Secretary

KHRUSHCHEV, Nikita S.

Secretaries

ARISTOV, Averky B.
BELYAEV, Nikolai I.
BREZHNEV, Leonid I.
FURTSEVA, Ekaterina A.
KUUSINEN, Otto V.
POSPELOV, Petr N.
SUSLOV, Mikhail A.

Party Control Committee

Chairman

SHVERNIK, Nikolai M.

Deputy Chairman

KOMAROV, Pavel T.

Central Auditing Commission

Chairman

MOSKATOV, Petr G.

Members of the Central Committee

ALFEROV, Pavel N. First Secretary of the Yaroslavl Oblast Committee. Deputy of the Supreme Soviet.

ANDREEV, Andrei A. Member of the Presidium of the Supreme Soviet. Member of the Politburo 1932—52. Deputy of the Supreme Soviets of the RSFSR and the Belorussian, Uzbek, and Turkmen SSR's.

ARISTOV, Averky B. Secretary and Member of the Presidium of the Central Committee. Deputy of the Supreme Soviets of the USSR and the RSFSR.

AVKHIMOVICH, Nikolai E. Member of the Office of the Central Committee of the Communist Party of Belorussia. Chairman of the Council of Ministers of the Belorussian SSR. Deputy Chairman of the Soviet of Nationalities.

BABAEV, Sukhan. First Secretary of the Central Committee of the Communist Party of Turkmenistan. Member of the Presidium of the Supreme Soviet of the Turkmen SSR. Deputy of the Supreme Soviet.

BAIBAKOV, Nikolai K. Chairman of Gosplan of the RSFSR. Deputy of the Supreme Soviet.

BELYAEV, Nikolai I. Secretary and Member of the Presidium of the Central Committee. Deputy Chairman of the Office of the Central Committee of the Communist Party for the RSFSR. Member of the Presidium of the Supreme Soviet of the RSFSR. Deputy of the Supreme Soviet.

BENEDIKTOV, Ivan A. Minister of Agriculture of the RSFSR. Deputy of the Supreme Soviet.

BESHCHEV, Boris P. Minister of Ways of Communication. Deputy of the Supreme Soviet.

BOBROVNIKOV, Nikolai I. Chairman of the Executive Committee of the Moscow City Soviet. Member of the Presidium of the Supreme Soviet of the RSFSR.

BOITSOV, Ivan P. Deputy Chairman of the Party Control Committee. Deputy of the Supreme Soviet.

BREZHNEV, Dmitry D. Second Secretary of the Leningrad Oblast Committee. Deputy of the Supreme Soviet of the RSFSR.

BREZHNEV, Leonid I. Secretary and Member of the Presidium of the Central Committee. Member of the Presidium of the Supreme Soviet of the Kazakh SSR. Deputy of the Supreme Soviet.

BULGANIN, Nikolai A. Member of the Presidium of the Central Committee. Chairman of the Council of Ministers. Deputy of the Supreme Soviets of the USSR, the RSFSR, and the Ukrainian, Belorussian, Uzbek, Kazakh, Georgian, Azerbaidzhan, Moldavian, Latvian, Kirgiz, Tadzhik, and Turkmen SSR's.

CHERNYSHEV, Vasily E. First Secretary of the Kaliningrad Oblast Committee. Deputy of the Supreme Soviet.

DANIYALOV, Abdurakhman D. First Secretary of the Dagestan Oblast Committee. Member of the Presidium of the Supreme Soviet.

DEMENTEV, Petr V. Minister of the Aviation Industry. Deputy of the Supreme Soviet.

DENISOV, Georgy A. First Secretary of the Saratov Oblast Committee. Deputy of the Supreme Soviet.

DERYUGIN, B. I. First Secretary of the Novosibirsk Oblast Committee.

DORONIN, Pavel I. First Secretary of the Smolensk Oblast Committee. Deputy of the Supreme Soviet.

DUDOROV, Nikolai P. Minister of Internal Affairs.

DZHAVAKHISHVILI, Givi D. Chairman of the Council of Ministers of the Georgian SSR. Deputy of the Supreme Soviets of the USSR and the Georgian SSR.

EFREMOV, Leonid N. First Secretary of the Kursk Oblast Committee. Deputy of the Supreme Soviet.

EFREMOV, Mikhail T. First Secretary of the Kuibyshev Oblast Committee. Deputy of the Supreme Soviet.

ENYUTIN, Georgy V. First Secretary of the Kamensk Oblast Committee. Deputy of the Supreme Soviet.

FURTSEVA, Ekaterina A. Secretary and Member of the Presidium of the Central Committee. Member of the Moscow City Soviet. Deputy of the Supreme Soviets of the USSR and the RSFSR.

GAEVOI, Anton I. First Secretary of the Zaporozhe Oblast Committee. Deputy of the Supreme Soviet.

GAFUROV, Bobodzhan G. First Secretary of the Central Committee of the Communist Party of Tadzhikistan. Member of the Presidium of the Supreme Soviet of the Tadzhik SSR. Deputy of the Supreme Soviet.

GORYACHEV, Fedor S. First Secretary of the Kalinin Oblast Committee. Deputy of the Supreme Soviet.

GRISHIN, Ivan T. Ambassador to Czechoslovakia. Deputy of the Supreme Soviet.

GRISHIN, Viktor V. Member of the Moscow City Soviet. Chairman of the All-Union Central Council of Trade Unions.

GROMYKO, Andrei A. Minister of Foreign Affairs.

IGNATEV, Semen D. First Secretary of the Tatar Oblast Committee. Deputy of the Supreme Soviets of the USSR and the RSFSR.

IGNATOV, Nikolai F. Second Secretary of the Moscow Oblast Committee. Chairman of the Mandate Commission of the Supreme Soviet of the RSFSR.

IGNATOV, Nikolai G. Member of the Presidium of the Central Committee. First Secretary of the Gorky Oblast Committee. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Deputy of the Supreme Soviet.

KABANOV, Ivan G. Minister of Foreign Trade. Deputy of the Supreme Soviet.

KÄBIN, Ivan G. First Secretary of the Central Committee of the Communist Party of Estonia. Member of the Presidium of the Supreme Soviet of the Estonian SSR. Deputy of the Supreme Soviet.

KALCHENKO, Nikifor T. Chairman of the Council of Ministers of the Ukrainian SSR. Deputy Chairman of the Soviet of the Union. Deputy of the Supreme Soviet of the Ukrainian SSR.

KALNBĒRZIŅŠ, Jan E. Candidate Member of the Presidium of the Central Committee. First Secretary of the Central Committee of the Communist Party of Latvia. Deputy of the Supreme Soviets of the USSR and the Latvian SSR.

KAPITONOV, Ivan V. First Secretary of the Moscow Oblast Committee. Member of the Moscow City Soviet. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Member of the Presidium of the Supreme Soviet. Deputy of the Supreme Soviet of the RSFSR.

KHRUNICHEV, Mikhail V. Deputy Chairman of Gosplan. Minister of the USSR.

KHRUSHCHEV, Nikita S. First Secretary and Member of the Presidium of the Central Committee. Chairman of the Office of the Central Committee of the Communist Party for the RSFSR. Member of the Presidium of the Supreme Soviet. Deputy of the Supreme Soviets of each individual republic.

KHVOROSTUKHIN, Alekscі I. First Secretary of the Tula Oblast Committee. Deputy of the Supreme Soviet.

KIRICHENKO, Alekscі I. Member of the Presidium of the Central Committee. First Secretary of the Central Committee of the Communist Party of the Ukraine. Member of the Presidium of the Supreme Soviets of the USSR and the Ukrainian SSR.

KIRILENKO, Andrei P. First Secretary of the Sverdlovsk Oblast Committee. Candidate Member of the Presidium of the Central Committee. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Deputy of the Supreme Soviet.

KISELEV, Nikolai V. First Secretary of the Rostov Oblast Committee. Deputy of the Supreme Soviet.

KLIMENKO, Vasily K. First Secretary of the Voroshilovgrad Oblast Committee. Deputy of the Supreme Soviet.

KOBELEV, B. N. First Secretary of the Irkutsk Oblast Committee. Deputy of the Supreme Soviet.

KOLUSHCHINSKY, Evgeny P. First Secretary of the Omsk Oblast Committee. Deputy of the Supreme Soviet.

KONEV, Ivan S. Marshal of the Soviet Union. Commander in Chief, Warsaw Pact Forces. First Deputy Minister of Defense. Deputy of the Supreme Soviet.

KORNEICHUK, Aleksandr E. Member of the Presidium of the Union of Soviet Writers. Member of the Presidium of the Board of the Union of Soviet Writers. Deputy of the Supreme Soviets of the USSR and the Ukrainian SSR.

KOROTCHENKO, Demyan S. Candidate Member of the Presidium of the Central Committee. Member of the Presidium of the Central Committee of the Communist Party of the Ukraine. Deputy Chairman of the Presidium of the Supreme Soviet. Chairman of the Presidium of the Supreme Soviet of the Ukrainian SSR.

KOSYGIN, Aleksei N. Candidate Member of the Presidium of the Central Committee. Deputy Chairman of the Council of Ministers. Deputy of the Supreme Soviets of the USSR, the RSFSR, and the Uzbek and Tadzhik SSR's.

KOVRIGINA, Mariya D. Minister of Health. Deputy of the Supreme Soviet.

KOZLOV, Frol R. Member of the Presidium of the Central Committee. Member of the Office of the Central Committee of the Communist Party for the RSFSR. First Secretary of the Leningrad Oblast Committee. Member of the Presidium of the Supreme Soviet. Deputy of the Supreme Soviet of the RSFSR.

KUCHERENKO, Vladimir A. Chairman of the State Committee for Building Affairs. Member of the Moscow City Soviet. Deputy of the Supreme Soviet of the RSFSR.

KUNAEV, Dinmukhamed A. Member of the Office of the Central Committee of the Communist Party of Kazakhstan. Chairman of the Council of Ministers of the Kazakh SSR. President of the Academy of Sciences of the Kazakh SSR. Deputy of the Supreme Soviets of the USSR and the Kazakh SSR.

KUUSINEN, Otto V. Secretary and Member of the Presidium of the Central Committee. Deputy Chairman of the Presidium of the Supreme Soviet.

KUZNETSOV, Vasily V. First Deputy Minister of Foreign Affairs. Deputy of the Supreme Soviet.

LAPTEV, Nikolai V. First Secretary of the Chelyabinsk Oblast Committee. Deputy of the Supreme Soviet.

LARIONOV, Aleksei N. First Secretary of the Ryazan Oblast Committee. Deputy of the Supreme Soviet.

LATUNOV, Ivan S. First Secretary of the Vologda Oblast Committee. Deputy of the Supreme Soviet.

LEBEDEV, Ivan K. First Deputy Chairman of the Council of Ministers of the RSFSR. Deputy of the Supreme Soviets of the USSR and the RSFSR.

LUBENNIKOV, Leonid I. Deputy of the Supreme Soviets of the USSR and the Belorussian SSR.

MALINOVSKY, Rodion Y. Marshal of the Soviet Union. Minister of Defense. Deputy of the Supreme Soviet.

MARCHENKO, Ivan T. Second Secretary of the Moscow City Committee. Member of the Moscow City Soviet. Deputy of the Supreme Soviet of the RSFSR.

MARKOV, Vasily S. First Secretary of the Orel Oblast Committee. Deputy of the Supreme Soviet.

MATSKEVICH, Vladimir V. Minister of Agriculture. Deputy of the Supreme Soviet.

MAZUROV, Kirill T. Candidate Member of the Presidium of the Central Committee. First Secretary and Member of the Office of the Central Committee of the Communist Party of Belorussia. Deputy of the Supreme Soviets of the USSR and the Belorussian SSR.

MIKHAILOV, Nikolai A. Minister of Culture. Member of the Moscow City Soviet. Deputy of the Supreme Soviet.

MIKOYAN, Anastas I. Member of the Presidium of the Central Committee. Deputy Chairman of the Council of Ministers. Deputy of the Supreme Soviets of the USSR, the RSFSR, and the Ukrainian, Belorussian, Uzbek, Kazakh, Azerbaidzhan, Moldavian, Latvian, Kirgiz, Tadzhik, and Armenian SSR's.

MITIN, Mark B. Chairman of the Board of the All-Union Society for the Dissemination of Political and Scientific Knowledge. Deputy of the Supreme Soviet.

MOSKALENKO, Kirill S. Marshal of the Soviet Union. Commander, Moscow Military District. Deputy of the Supreme Soviet.

MOSKVIN, Vasily A. First Secretary of the Tomsk Oblast Committee. Deputy of the Supreme Soviet.

MUKHITDINOV, Nuritdin A. Candidate Member of the Presidium of the Central Committee. First Secretary of the Central Committee of the Communist Party of Uzbekistan. Chairman of the Commission for Foreign Affairs of the Soviet of Nationalities. Deputy of the Supreme Soviets of the USSR and the Uzbek SSR.

MURATOV, Zinnyat I. Member of the Presidium of the Supreme Soviet. Deputy of the Supreme Soviet of the RSFSR.

MUSTAFAEV, Imam D. First Secretary of the Central Committee of the Communist Party of Azerbaidzhan. Member of the Presidium of the Supreme Soviet of the Azerbaidzhan SSR. Deputy of the Supreme Soviet.

MZHAVANADZE, Vasily P. Candidate Member of the Presidium of the Central Committee. First Secretary of the Central Committee of the Communist Party of Georgia. Deputy Chairman of the Soviet of the Union. Member of the Presidium of the Supreme Soviet of the Georgian SSR. Deputy of the Supreme Soviet.

NAZRIDDINOVA, Yadgar S. Deputy Chairman of the Council of Ministers of the Uzbek SSR. Deputy of the Supreme Soviet of the Uzbek SSR.

ORGANOV, Nikolai N. First Secretary of the Krasnoyarsk Krai Committee. Deputy of the Supreme Soviet.

PATOLICHEV, Nikolai S. First Deputy Minister of Foreign Affairs. Member of the Presidium of the Supreme Soviet of the Belorussian SSR. Deputy of the Supreme Soviet.

PEGOV, Nikolai M. Ambassador to Iran. Member of the Moscow City Soviet. Deputy of the Supreme Soviet.

PERVUKHIN, Mikhail G. Candidate Member of the Presidium of the Central Committee. Chairman of the State Committee for Foreign Economic Relations. Deputy of the Supreme Soviets of the USSR, the RSFSR, and the Ukrainian, Belorussian, Uzbek, Kazakh, Georgian, Azerbaidzhan, Moldavian, Kirgiz, and Tadzhik SSR's.

PETUKHOV, Konstantin D. Chairman of the Moscow City Sovnarkhoz.

PODGORNY, Nikolai V. Second Secretary and Member of the Presidium of the Central Committee of the Communist Party of the Ukraine. Member of the Presidium of the Supreme Soviet of the Ukrainian SSR. Deputy of the Supreme Soviet.

POLYANSKY, Dmitry S. First Secretary of the Krasnodar Krai Committee. Deputy of the Supreme Soviet.

PONOMARENKO, Panteleimon K. Ambassador to India and Nepal. Member of the Presidiums of the Supreme Soviets of the USSR and the Kazakh SSR. Deputy of the Supreme Soviet of the Uzbek SSR.

PONOMAREV, Boris N. Editor of *Kommunist*.

POSPELOV, Petr N. Secretary and Candidate Member of the Presidium of the Central Committee. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Deputy of the Supreme Soviets of the USSR, the RSFSR, and the Belorussian, Uzbek, Kazakh, Georgian, Moldavian, Latvian, and Tadzhik SSR's.

PROKOFEV, Vasily A. First Secretary of the Murmansk Oblast Committee. Deputy of the Supreme Soviet.

PUZANOV, Aleksandr M. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Member of the Moscow City Soviet. Deputy of the Supreme Soviets of the USSR and the RSFSR.

PYSIN, Konstantin G. First Secretary of the Altai Krai Committee. Deputy of the Supreme Soviet.

RAGIMOV, Sadykh G. Y. Member of the Office of the Central Committee of the Communist Party of Azerbaidzhan. Chairman of the Council of Ministers of the Azerbaidzhan SSR. Deputy of the Supreme Soviets of the USSR and the Azerbaidzhan SSR.

RAZZAKOV, Iskhak R. First Secretary of the Central Committee of the Communist Party of Kirgizia. Member of the Presidium of the Supreme Soviet of the Kirgiz SSR. Deputy of the Supreme Soviet.

RUMYANTSEV, Aleksei M. Chief Editor of *Kommunist*. Deputy of the Supreme Soviet.

SABUROV, Maksim Z. Deputy of the Supreme Soviets of the USSR, the RSFSR, and the Ukrainian, Belorussian, Uzbek, Kazakh, Georgian, Azerbaidzhan, Moldavian, Latvian, Kirgiz, and Tadzhik SSR's.

SERDYUK, Zinovy T. First Secretary of the Central Committee of the Communist Party of Moldavia. Member of the Presidium of the Supreme Soviet of the Moldavian SSR. Deputy of the Supreme Soviet.

SEROV, Ivan A. Chairman of the Committee for State Security. General of the Army. Deputy of the Supreme Soviet of the RSFSR.

SHELEPIN, Aleksandr N. First Secretary of the Central Committee of the Komsomol. Deputy of the Supreme Soviet.

SHKOLNIKOV, Aleksei M. First Secretary of the Voronezh Oblast Committee. Deputy of the Supreme Soviet.

SHTYKOV, Terenty F. First Secretary of the Maritime Krai Committee. Deputy of the Supreme Soviet.

SHVERNIK, Nikolai M. Member of the Presidium of the Central Committee. Chairman of the All-Union Central Council of Trade Unions. Member of the Presidium of the Supreme Soviet. Chairman of the Party Control Committee. Deputy of the Supreme Soviets of the RSFSR and the Ukrainian, Belorussian, Uzbek, Kazakh, Moldavian, Latvian, and Tadzhik SSR's.

SNEČKUS, Antanas J. First Secretary of the Central Committee of the Communist Party of Lithuania. Member of the Presidium of the Supreme Soviet of the Lithuanian SSR. Deputy of the Supreme Soviet.

SOKOLOVSKY, Vasily D. Marshal of the Soviet Union. Deputy Minister of Defense. Chief of Army and Navy General Staff. Deputy of the Supreme Soviet.

STAKHURSKY, Mikhail M. First Secretary of the Khabarovsk Krai Committee. Deputy of the Supreme Soviet.

STRUEV, Aleksei I. First Secretary of the Perm Oblast Committee.* Deputy of the Supreme Soviet.

SUSLOV, Mikhail A. Secretary and Member of the Presidium of the Central Committee. Chairman of the Commission for Foreign Affairs of the Soviet of the Union. Deputy of the Supreme Soviets of the RSFSR and the Ukrainian, Belorussian, Uzbek, Kazakh, Georgian, Lithuanian, Moldavian, Latvian, and Tadzhik SSR's.

SUSLOV, Viktor M. Deputy of the Supreme Soviet.

TEVOSYAN, Ivan F. Ambassador to Japan. Deputy of the Supreme Soviets of the USSR and the RSFSR.

TIKHOMIROV, Sergei M. Minister of the Chemical Industry. Deputy of the Supreme Soviet.

TITOV, Fedor E. First Secretary of the Ivanovo Oblast Committee. Deputy of the Supreme Soviet.

TITOV, Vitaly N. First Secretary of the Kharkov Oblast Committee. Deputy of the Supreme Soviet.

TOVMASYAN, Suren A. First Secretary of the Central Committee of the Communist Party of Armenia. Member of the Presidium of the Supreme Soviet of the Armenian SSR. Deputy of the Supreme Soviet.

* Formerly the Molotov Oblast Committee.

USTINOV, Dmitry F. Minister of the Defense Industry. Deputy of the Supreme Soviet.

VANNIKOV, Boris L. No information available.

VASILEVSKY, Aleksandr M. First Deputy Minister of Defense. Deputy of the Supreme Soviet.

VOLKOV, Aleksandr P. Chairman of the State Commission for Questions of Labor and Wages. Chairman of the Moscow Oblast Executive Committee. Member of the Moscow City Soviet. Deputy of the Supreme Soviet.

VORONOV, Gennady I. Deputy of the Supreme Soviet.

VOROSHILOV, Kliment E. Member of the Presidium of the Central Committee. Chairman of the Presidium of the Supreme Soviet. Deputy of the Supreme Soviets of the RSFSR and the Ukrainian, Belorussian, Uzbek, Kazakh, Georgian, Azerbaidzhan, Moldavian, Latvian, Kirgiz, Tadzhik, and Turkmen SSR's.

YAKOVLEV, Ivan D. First Secretary of the Central Committee of the Communist Party of Kazakhstan. Deputy of the Supreme Soviets of the USSR and the RSFSR.

YASNOV, Mikhail A. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Chairman of the Council of Ministers of the RSFSR. Member of the Moscow City Soviet. Deputy of the Supreme Soviets of the USSR and the RSFSR.

YUDIN, Pavel F. Ambassador to China. Deputy of the Supreme Soviet.

ZADEMIDKO, Aleksandr N. Chairman of the Kemerovo Sovnarkhoz.

ZHEGALIN, Ivan K. First Secretary of the Stalingrad Oblast Committee. Deputy of the Supreme Soviet.

ZVEREV, Arseny G. Minister of Finance. Deputy of the Supreme Soviet.

The following, elected at the Twentieth Party Congress, are no longer members:

Deceased:

MALYSHEV, Vyacheslav A. PANKRATOVA, Anna M. ZAVENYAGIN, Avraamy P.

Excluded:

KAGANOVICH, Lazar M. MALENKOV, Georgy M. MOLOTOV, Vyacheslav M.
SHEPILOV, Dmitry T. ZHUKOV, Georgy K.

Candidate Members of the Central Committee

ANDREEVA, N. N. Member of the Moscow City Soviet.

BAGRAMYAN, Ivan K. Marshal of the Soviet Union. Head of the Voroshilov Higher General Staff Military Academy. Deputy of the Supreme Soviet.

BIRYUZOV, Sergei S. Marshal of the Soviet Union. Deputy Minister of Defense. Commander in Chief, Antiaircraft Defense. Deputy of the Supreme Soviet.

BORISOV, Semen Z. First Secretary of the Yakutsk Oblast Committee. Deputy of the Supreme Soviet.

BUBNOVSKY, Nikita D. Secretary of the Central Committee of the Communist Party of the Ukraine. Deputy of the Supreme Soviets of the USSR and the Ukrainian SSR.

BUDENNY, Semen M. Marshal of the Soviet Union. Inspector of Cavalry. Member of the Presidium of the Supreme Soviet.

BUTUZOV, Sergei M. First Secretary of the Penza Oblast Committee. Deputy of the Supreme Soviet.

CHEPLAKOV, Petr F. First Secretary of the Sakhalin Oblast Committee. Deputy of the Supreme Soviet.

CHUBINIDZE, Miron D. Deputy Chairman of the Presidium of the Supreme Soviet. Chairman of the Presidium of the Supreme Soviet of the Georgian SSR. Deputy of the Supreme Soviets of the USSR and the Georgian SSR.

CHUIKOV, Vasily I. Marshal of the Soviet Union. Commander, Kiev Military District. Member of the Presidium of the Supreme Soviet of the Ukrainian SSR. Deputy of the Supreme Soviet.

CHURAEV, Viktor M. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Deputy of the Supreme Soviet.

DYGAI, Nikolai A. Deputy of the Supreme Soviet.

ELYUTIN, Vyacheslav P. Minister of Higher Education. Deputy of the Supreme Soviet of the RSFSR.

EPISHEV, Aleksei A. Ambassador to Romania. Deputy of the Supreme Soviet.

EREMENKO, Andrei I. Marshal of the Soviet Union. Commander, North Caucasus Military District. Deputy of the Supreme Soviet.

EVSEENKO, Mikhail A. Deputy Chairman of Gosplan of the RSFSR. Minister of the RSFSR.

FIRYUBIN, Nikolai P. Former Ambassador to Yugoslavia. Present position unknown.

FLORENTEV, L. Y. Deputy of the Supreme Soviet of the RSFSR.

GANENKO, Ivan P. First Secretary of the Astrakhan Oblast Committee. Deputy of the Supreme Soviet.

GLEBOVSKY, G. N. Director of the Ural Heavy Machine Building Works *Uralmash*.

GORBATOV, Aleksandr V. Colonel General. Commander, Baltic Military District. Deputy of the Supreme Soviets of the USSR and the Latvian SSR.

GORSHKOV, Sergei G. Deputy Minister of Defense. Admiral of the Fleet. Commander in Chief, Naval Forces. Deputy of the Supreme Soviet.

GRECHKO, Andrei A. Marshal of the Soviet Union. Commander, Soviet Forces in Germany. Deputy of the Supreme Soviet.

GRECHUKHA, Mikhail S. First Deputy Chairman of the Council of Ministers of the Ukrainian SSR. Deputy of the Supreme Soviets of the USSR and the Ukrainian SSR.

GRISHIN, K. N. Deputy of the Supreme Soviet of the RSFSR.

GRISHKO, Grigory E. Candidate Member of the Presidium of the Central Committee of the Communist Party of the Ukraine. Chairman of the Mandate Commission of the Supreme Soviet of the Ukrainian SSR. Deputy of the Supreme Soviets of the USSR and the Ukrainian SSR.

GROMOV, E. I. Deputy of the Supreme Soviet.

GUREEV, Nikolai M. Deputy Chairman of the Council of Ministers of the Ukrainian SSR. Deputy of the Supreme Soviets of the USSR and the Ukrainian SSR.

ISHKOV, Aleksandr A. Minister of the USSR.

ISLYUKOV, S. M. Deputy of the Supreme Soviet of the RSFSR.

IVASHCHENKO, Olga I. Secretary of the Central Committee of the Communist Party of the Ukraine. Deputy of the Supreme Soviets of the USSR and the Ukrainian SSR.

KALMYKOV, Valery D. Minister of the Radio Industry.

KANUNNIKOV, Mikhail Y. First Secretary of the Pskov Oblast Committee. Deputy of the Supreme Soviet.

KARASEV, V. Y. Deputy of the Supreme Soviet.

KAZANETS, Ivan P. First Secretary of the Stalino Oblast Committee. Deputy of the Supreme Soviet.

KHAKHALOV, Aleksandr U. First Secretary of the Buryat-Mongol Oblast Committee. Deputy of the Supreme Soviet.

KLIMOV, A. P. Chairman of the Board of the Central Union of Consumers' Cooperatives.

KOMAROV, Pavel T. Deputy Chairman of the Party Control Committee. Deputy Chairman of the Soviet of Nationalities. Deputy of the Supreme Soviet.

KOMYAKHOV, Vasily G. First Secretary of the Crimean Oblast Committee. Deputy of the Supreme Soviet.

KONSTANTINOV, F. V. Corresponding Member of the Academy of Sciences of the USSR.

KORNIETS, Leonid R. Minister of Grain Products. Deputy of the Supreme Soviet.

KOSOV, V. V. No information available.

KOSTOUSOV, Anatoly I. Chairman of the Moscow Oblast Sovnarkhoz. Deputy of the Supreme Soviet.

KOVAL, K. I. No information available.

KOZLOV, Alekxei I. Deputy of the Supreme Soviet.

KOZLOV, Vasily I. Deputy Chairman of the Presidium of the Supreme Soviet. Chairman of the Presidium of the Supreme Soviet of the Belorussian SSR.

KRAKHMALEV, Mikhail K. First Secretary of the Belgorod Oblast Committee. Deputy of the Supreme Soviet.

KUMYKIN, P. N. Deputy Minister of Foreign Trade.

LACIS, Vilis T. Chairman of the Soviet of Nationalities. Chairman of the Council of Ministers of the Latvian SSR. Deputy of the Supreme Soviets of the USSR and the Latvian SSR.

LOBANOV, Pavel P. President of the Lenin All-Union Academy of Agricultural Sciences. Deputy of the Supreme Soviets of the USSR and the RSFSR.

LOGINOV, S. P. Deputy of the Supreme Soviet of the RSFSR.

LOMAKO, Petr F. Chairman of the Krasnoyarsk Sovnarkhoz. Deputy of the Supreme Soviet.

LUCHINSKY, Aleksandr A. General. Commander, Turkestan Military District. Deputy of the Supreme Soviet.

LUNEV, K. F. Deputy Minister of Internal Affairs.

LYKOVA, L. P. Secretary of the Ivanovo Oblast Committee. Deputy of the Supreme Soviet of the RSFSR.

MAKSAREV, Yury E. Chairman of the State Scientific and Technical Committee.

MALIK, Yakov A. Ambassador to Great Britain.

MELNIKOV, Leonid G. No information available.

MELNIKOV, Roman E. Second Secretary of the Central Committee of the Communist Party of Uzbekistan. Member of the Presidium of the Supreme Soviet of the Uzbek SSR. Deputy of the Supreme Soviet.

MENSHIKOV, Mikhail A. Former Ambassador to India. Present position unknown.

MÜÜRISEPP, Aleksei A. Chairman of the Council of Ministers of the Estonian SSR. Deputy of the Supreme Soviets of the USSR and the Estonian SSR.

MYLARSHCHIKOV, V. P. Member of the Office of the Central Committee of the Communist Party for the RSFSR. Head of the Agricultural Department of the Central Committee of the Communist Party for the RSFSR. Deputy of the Supreme Soviet of the RSFSR.

NAIDEK, Leonty I. First Secretary of the Odessa Oblast Committee. Deputy of the Supreme Soviet.

NEDELIN, Mitrofan I. Marshal of Artillery. Commander in Chief, Soviet Artillery. Head of the Chief Administration for Artillery. Deputy of the Supreme Soviet.

NEFEDOVA, O. I. No information available.

NIKITIN, P. V. Deputy Chairman of the State Committee for Foreign Economic Relations.

ORLOV, Georgy M. Deputy of the Supreme Soviet.

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RUD, Gerasim Y. Chairman of the Council of Ministers of the Moldavian SSR. Deputy of the Supreme Soviets of the USSR and the Moldavian SSR.

RUDAKOV, A. P. No information available.

RUDENKO, Roman A. Procurator General. Deputy of the Supreme Soviet.

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SIZOV, G. F. Deputy of the Supreme Soviet of the RSFSR.

SKIDANENKO, Ivan T. Deputy Minister of Electric Power Stations.

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SMIRNOV, Nikolai I. No information available.

SOKOLOV, T. I. Deputy of the Supreme Soviet of the RSFSR.

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ŠUMAUSKAS, Motejus J. Member of the Office of the Central Committee of the Communist Party of Lithuania. Chairman of the Council of Ministers of the Lithuanian SSR. Deputy of the Supreme Soviets of the USSR and the Lithuanian SSR.

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SURKOV, Alekxei A. Member of the Presidium and First Secretary of the Union of Soviet Writers. Deputy of the Supreme Soviet.

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TOKA, Salchak K. First Secretary of the Tuvan Oblast Committee. Deputy of the Supreme Soviet.

TROFIMOV, Aleksandr S. First Secretary of the Balashov Oblast Committee. Deputy of the Supreme Soviet.

TUMANOVA, Z. P. Secretary of the Central Committee of the Komsomol.

TUR, I. P. No information available.

VORONOV, F. D. No information available.

YURKIN, Tikhon A. No information available.

ZAKURDAEV, Vasily I. First Secretary of the Mordvinian Oblast Committee. Deputy of the Supreme Soviet.

ZAMCHEVSKY, Ivan K. Ambassador to Yugoslavia. Deputy of the Supreme Soviet.

ZARUBIN, Georgy N. Ambassador to the United States.

ZHAVORONKOV, Vasily G. Chairman of the Soviet Control Commission. Deputy of the Supreme Soviet.

ZHIGAREV, Pavel F. Chief Marshal of Aviation. Chief of Civil Air Lines. Deputy of the Supreme Soviet.

ZHIMERIN, Dmitry G. Deputy Chairman of Gosplan of the RSFSR. Minister of the RSFSR. Deputy of the Supreme Soviet.

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ZHURIN, Nikolai I. Deputy of the Supreme Soviet.

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ZORIN, Valerian A. Head of the Soviet Delegation to the Subcommittee of the UN Disarmament Commission.

ZOTOV, Vasily P. Deputy of the Supreme Soviet.

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LIKHACHEV, Ivan A.
NOSENKO, Ivan I.
YUDIN, Pavel A.

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VOROSHILOV, Kliment E.

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BOYANOVA, Vera R.
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Transportation Construction:
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Defense:
MALINOVSKY, Rodion Y.

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DUDOROV, Nikolai P.

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ZVEREV, Arseny G.

Trade:
PAVLOV, Dmitry V.

Communications:
PSURTSEV, Nikolai D.

Geology and Mineral Resource Conservation:
ANTROPOV, Petr Y.

Health:
KOVRIGINA, Mariya D.

Agriculture:
MATSKEVICH, Vladimir V.

Grain Products:
KORNIETS, Leonid R.

Higher Education:
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STROKIN, Nikolai I.

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Kirgiz SSR	SUERKULOV, Abdy
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bulletin

Institute for the Study of the USSR

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The BULLETIN is a publication of the INSTITUTE FOR THE STUDY OF THE USSR. Its purpose is to present the free world an analysis of contemporary events and studies of Soviet history and culture by persons who know the system intimately. Most of our writers and analysts have lived in the Soviet Union, some of them very recently, and are accordingly able to analyze life in the USSR from the viewpoint of personal experience.

*

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All comments and inquiries are most welcome and should be addressed to:

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bulletin Institute for the Study of the USSR

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ARTICLES

The Problem of Technological Progress in Totalitarian and Free Societies

NIKOLAI GALAY

Recent Soviet success in orbiting two artificial earth satellites, weighing 83.6 and 508.3 kilograms respectively,[1] has led to a serious re-evaluation of Soviet science and engineering by scholars and statesmen in the free world. The magnitude of the problems that have been solved reflects a high degree of knowledge and ability and indicates that the Soviets have come up with answers to many questions that apparently have not yet been solved by the West and clearly demonstrates their ability to translate theory into practice in a wide variety of fields.

The chief features of the Soviet achievement were: (1) The Soviets were the first to get a satellite into an orbit. (2) The weight of the second Soviet satellite, and even the first one, was so much greater than that of the proposed first American satellites (only about three kilograms) that the latter appeared to be out of date before they were even launched. (3) The Soviet satellites were a by-product of work on intercontinental missiles, a fact which further underlines the Soviets' military and technological progress, since the United States has not yet successfully tested a long-range missile. (4) The Soviet lead in rocket techniques and new forms of fuel will apparently not be short-lived.

One result of the Soviet success has been increased Soviet political and psychological influence on the non-Communist world, especially the underdeveloped countries of Asia and Africa. The Kremlin has done all to emphasize that the progress made by Soviet science and technology stems from the "socialist organization of society," which has enabled a country that only forty years ago was a backward, agrarian land to surpass the most powerful industrial states of the capitalist world in scientific and technological progress.

[1] *Izvestia*, October 5 and November 5, 1957.

The knowledge that the Soviets have gone a long way with their missile development has tended to overshadow the obvious shortcomings in the satellites themselves. In spite of their considerable weight the artificial satellites contained far fewer instruments and much less radio equipment than they might, a fact which even the successful experiment with a living passenger cannot hide. Both satellites quickly became silent, although their basic task must have been to transmit a continuous flow of information about conditions in space. Nevertheless, the Soviet Union's lead over such a wealthy, powerful, and technically advanced country as the United States had a considerable psychological impact. The non-Communist world's reaction to the satellites and the hurried steps taken to make up the United States' lag show that Western public opinion has suffered a considerable shock. Thus, the American physicist and so-called father of the hydrogen bomb Edward Teller claimed that the United States has suffered a greater defeat than at Pearl Harbor by falling behind the Soviet Union in the scientific field.[2] At the same time, he stated that he did not know how long it would take to overtake the USSR. The NATO conference of heads of states slated for the middle of December 1957 aims at stepping up the defense of the West as quickly as possible and unifying the research of the NATO powers in an effort to balance the scales.

The extent to which the Soviet ballistic missiles will change the relationship of the free world's forces to those of the Communist bloc and Khrushchev's chances of carrying out his policy of atomic blackmail and threats for any length of time are two important problems which lie outside the scope of the present article. We are more concerned here with the theoretical side of the question—the general problem of the possibilities for technological progress in totalitarian and free societies.

The Soviet earth satellites almost automatically raise the question of whether a totalitarian system of collective leadership using forced labor is capable of greater scientific and technological achievements in a limited space of time than a free society. This problem has become particularly important in view of the struggle being waged between Communism and the non-Communist world. Its outcome will be determined to a considerable extent by the way public opinion as a whole and the peoples of the underdeveloped countries of Asia and Africa, in particular, react to the question. The answer of the latter will determine the methods by which their countries will seek to develop their productive forces: by Soviet collectivism or the encouragement of free initiative and a free economy.

After the launching of Sputnik I certain sections of the Western press, primarily in Germany, immediately began to stress the role played by German scientists in the Soviet Union's achievement. There is no doubt that the Bolsheviks made good use of their military "booty"—German records of rocket development and teams of German rocket specialists—after the collapse of the Hitler regime. For example, in 1954 there were considerable numbers of German specialists at 16 centers engaged in research on rockets and their construction.[3]

[2] *The New York Times*, November 25, 1957.

[3] B. H. Liddell Hart (ed.), *Die Rote Armee*, Bonn, 1956, p. 473.

However, this does not mean that it was the Germans who created the long-range ballistic missile, thereby fathering the Soviet satellites. One has only to remember that there were just as many German rocket specialists who had been engaged on the wartime development of the V-1 and V-2 rockets who went to the United States, where they are still working in the same field. Moreover, the majority of the German specialists in the USSR have been permitted to return home.[4] Finally, the German scientists who went to America included three outstanding representatives of German rocketry: Wernher von Braun, who built the V-2 rocket, General Dornberger, the former head of rocket research in Germany, and Dr. Ley. The Soviet Union, on the other hand, obtained only the assistants of these three. Clearly, the German contribution alone has not been the deciding factor.

One important fact overlooked by students of the problem is that, in the spheres of science having a direct bearing on rocket techniques, the contribution of the old Russian and the younger Soviet scientists was so great, that during the war the Germans had used the formulas of Meshchersky, Chaplygin, Tsiolkovsky, and other Russian pioneers of rocket development who had laid the theoretical foundations.

Furthermore, the view that information obtained by espionage or the use of the talents of individual foreign specialists could acquire for any particular country priority in a specific branch of science or military technique is unfounded under present conditions. The application of new ideas and inventions requires that society be at a certain level and capable of appreciating the significance of the new ideas, and have a definite organization in order to make use of them. Otherwise, the projects put forward by brilliant scientists could be put to no practical use. However, the fact that the achievements of German rocket technology were immediately appreciated and taken over by Soviet specialists, who then began to combine their knowledge with that of the Germans, shows that the USSR had the necessary scientific level and organization.

The Soviets did not have to start from scratch.

> Our contemporary scientific achievements have deep roots in the history of our native country's science. The questions of rocket and jet propulsion were studied in Russia long ago .... Much valuable work in gunpowder-propelled rockets was done by well-known artillery specialist K. I. Konstantinov, who worked during the first half and the middle of the nineteenth century.... At the end of the nineteenth century I. V. Meshchersky, professor at the St. Petersburg Polytechnical Institute, worked out the theory of bodies of variable mass which even now is the basis of all the calculations in the sphere of rocket technique. However, the most important contribution was the work of K. E. Tsiolkovsky, who worked out a general theory of cosmic flight as early as 1903 and a concrete project for multistage rockets in 1929.[5]

These words must be supplemented to some extent. In the creation of a ballistic missile for the launching of the satellites the most outstanding part was played by scientists from the Academy of Artillery Sciences, founded in 1946,

[4] *Wehrwissenschaftliche Rundschau*, Karlsruhe, No. 9 (1954), p. 419.

[5] *Izvestia*, October 8, 1957.

and the Dzerzhinsky Artillery Academy, the former Mikhailovsky Artillery Academy, which prior to 1917 had had the reputation of being one of the finest higher educational establishments in the world and had turned out such outstanding chemists, ballistic experts, and metallurgists as Chernov, Konstantinov, Gadolin, Maevsky, and Ipatev. Blagonravov and Tikhonravov, whose names were mentioned in connection with the launching of the satellites, are corresponding members of the Academy of Artillery Sciences and professors at the Artillery Academy. The quality of the scientific heritage handed down by Tsarist Russia to the Soviet regime can be judged from the little-known role played by Russian scientists in the development of German artillery, particularly in the technological progress of the Krupp works prior to World War I.

A booklet published by Krupp in 1912 to mark the plant's centenary cited theoretical and practical assistance rendered by Russian artillery specialists in solving the problems of producing large-caliber guns for the Prussian government at the end of the last century, and admitted Russian help was needed.

> At the Okhta artillery ground [near St. Petersburg] the Krupp specialists carried out their experiments, [which] Russian ballistic and gunpowder experts directed. The Prussian government threatened to cancel the order for heavy weapons and to transfer it to the [British] Armstrong Works. Krupp, referring to the successes achieved with Russian help, asked for [postponement] for one year.[6]

This example was quoted by the Russian military scientist N. N. Golovin in his book *Russia's Military Efforts During the World War* as an indication of how Russian scientific thought, unfruitful in its own country due to the lack of the necessary scientific organization and economic base, germinated in more nutritive soil where, although there may not have been any brilliant scientists, science was well organized and there was a high level of social and economic development.[7]

The work of the German missile experts in the USSR after World War II was a repetition of this German–Russian cooperation. Now, as then, leading Russian theoreticians work with German technicians, directing their experiments, but with one major difference: the Soviet scientists today have an organized science which has grown up in the course of the past 40 years on the excellent scientific foundation inherited from old Russia. As a result the technical skill and experience of the German rocket specialists saved the Soviet scientists much time and provided them with new ideas for working out the problems of rocket technique.

This theory of "foreign" influence does not, however, explain the different possibilities for the development of science and technology in free and totalitarian societies. Much more to the point in this respect is what has been said by Western scientists who have had the opportunity to work for some time in the USSR, or by scientists from the satellite countries who have had to work under a totalitarian regime but have managed to give an account of their experiences.

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[6] Quoted in General N. N. Golovin, *Voennye usiliya Rossii v mirovoi voine* (Russia's Military Efforts During the World War), Paris, 1939, I, 72.

[7] *Ibid.*, p. 73.

Two eminent non-Soviets have recently given valuable, if contradictory testimony on this topic: Sir Eric Ashby, president and vice-chancellor of Belfast University, who served during the war with the Australian legation in Moscow and worked with Soviet scientists during these years, and the Yugoslav Communist physicist Stefan Dedijer, chief of the nuclear research institute in Zagreb and brother of Vladimir Dedijer, Tito's biographer. It is, perhaps, surprising that Sir Eric Ashby does not believe that a totalitarian regime hampers scientific and technical progress, whereas the Yugoslav categorically asserts that it would be harmful for underdeveloped countries to proceed along the lines of organized science adopted in totalitarian states. Sir Ashby, in a detailed article entitled "Science and the Soviet Army,"[8] lists five basic factors on which he considers Soviet scientific development depends. These are "a supply of high intelligence; an education system which trains this intelligence well and steers it into careers of pure and applied science; a social climate which accords a high prestige to science; a familiarity with the currents of thought among scientists in other countries; and sufficient freedom from interference to enable the Soviet scientist to choose his research project . . . without interference and to work at it according to his conscience."[9] Sir Ashby asserts that the first three are assured in the USSR. But while he agrees that Soviet scientists are isolated to a certain extent from the West and that the authorities denounce certain scientific theories, he doubts whether this will have an adverse effect on Soviet technological and scientific progress. This deduction is supported by two somewhat dubious arguments: first, he doubts whether Soviet scientists need the same "intellectual climate" as their British or American counterparts or whether they even wish it, and second, as an analogy, he considers that the Golden Age of Russian Literature proved invulnerable to the political persecutions of an autocratic regime. However, at the same time he makes some extremely interesting comments on the conditional nature of the Soviet scientists' isolation from the West—they can have any literature they want, for example—and what little effect even in the West the right to criticize and hold one's own opinions has. Sir Ashby asks in his article whether the view that science can be successful only among free peoples in a free society does not give a sense of false security. "The persecution of biologists by Lysenko and his colleagues, the purge of Sergeyev and other medical research workers, the fulminations against physicists who accept the work of Heisenberg and Einstein—these circumstances, we are assured, justify us in expecting that science will not survive in Russia."[10] He believes that no one can give a definite answer to this question. His comment that the USSR has every likelihood of making scientific and technological progress, it must be added, was made long before the Soviet satellites were launched.

The other scientist, the atomic physicist Stefan Dedijer, published his article in the September 1957 issue of the American *Bulletin of the Atomic Sciences*.[11]

[8] B. H. Liddell Hart (ed.), *The Soviet Army*, London, 1956, pp. 452–60.

[9] *Ibid.*, p. 459.

[10] *Ibid.*, p. 458.

[11] *Neue Zürcher Zeitung*, Zurich, November 2, 1957.

He discussed the problem of scientific research in totalitarian countries and gave an evaluation of what the methods used in these countries would be worth if applied to develop science in underdeveloped countries. On the basis of his experience in Yugoslavia he mercilessly criticizes the system of organized science in totalitarian countries and describes the pernicious and hampering influence on scientific development resulting from the mania for secrecy, the pseudo-scientific influences of a political doctrine which kills all attempts at working to a fixed plan, and the irrational squandering of men and supplies. Dedijer gives two basic reasons for the USSR overtaking the West in atomic development: the rich Tsarist inheritance—a highly developed basis for research and the relevant scientific institutions—and the utilization of human labor as the cheapest possible material with no regard for losses. (He also considers this a heritage of old Russia.)

Noting that a highly developed foundation for research is almost totally lacking in economically backward countries, and that without it the large-scale use of manpower cannot be effective, he warns all such countries of the dangers facing them if they try to create and develop a science on the Soviet totalitarian model.

A comparison of these two opposing viewpoints reveals certain interesting features:

1. Only Dedijer gives a direct answer tc the general question of the relative opportunities for technological progress in totalitarian and free societies, while Sir Ashby limits himself to a single concrete example: the USSR.

2. In evaluating the possibilities for technological progress in the Soviet totalitarian system both men agreed that they existed, but they put different shades of meaning into their statements. Sir Ashby has considerable faith in the Soviet Union's future scientific prospects, while Dedijer gave a more cautious opinion in view of such special features as the rich scientific heritage from Tsarist Russia, features not connected with socialist or Communist achievements.

3. The problem of the automatic dependence of the level of the exact sciences on that of the social sciences in general was hardly touched on by either of the two writers.

4. The conditions under which the two men gained their experience should be noted. Sir Ashby was a privileged foreigner with diplomatic immunity, an outside observer of the Soviet system. Dedijer, on the other hand, had himself helped build the new collective society and found the regime. This explains a number of the differences in their views on the general question of totalitarianism and scientific progress, in spite of their more or less identical views on the prospects for advancement under the Soviet system at the present stage of development.

Although these two testimonies are undoubtedly of value, two additional factors of importance in this problem should be noted. These are: (1) the close link between branches of science having military significance and those of a general nature and war's resultant role as an impetus to technological progress; and (2) the political characteristic of modern totalitarian regimes, particularly

Communist totalitarianism, which is in a constant state of war with the rest of the world in one form or another, hot or cold, total or local, economic or political, propagandistic or ideological.

These factors have to a great extent determined the prospects of Soviet scientific successes and are exceptionally important in the problem of technological progress in totalitarian and free societies.

There has always been a link between the military and general branches of science; it has become of prime importance in the modern era. The dawning of the atomic age and the invention of chemical and bacteriological weapons have in essence removed the distinction between military and civil branches of science. The last two world wars have seen rapid advances in science and technology. Not only did military needs engender numerous discoveries in these fields, but many peacetime discoveries which had been neglected were developed and perfected rapidly during the fighting and stayed on when peace came. Examples are: discoveries of chemical substitute materials, a process begun during World War I by the German Haber; the rapid progress of aviation; the rapid and large-scale introduction of motor vehicles for peacetime purposes after World War I; the perfection of communications (long-range telephone links, radio, electronics); the discovery of penicillin and antibiotics; and the application of atomic energy. Finally, the current arms race has determined the appearance of long-range missiles and their by-products, the satellites, which have opened up the new era of interplanetary communication.

This naturally does not mean that we can return to the Heraclitus maxim that war is the father of all things. The definition was only a thesis in Heraclitus' philosophy and he supplemented it by the "bow and lyre" concept— the multiform harmony of opposites—an addition overlooked by Marx and Lenin when they took over the thesis. This symbol of the dialectical principle that harmony is born of opposites is also reflected in the link between military and general science. Both the bow and the lyre are formed on a single principle—the system of opposing forces. As a bow string can be converted into a string for the lyre so too are the military and humanitarian subjects interchangeable. The fact that nowadays this interchangeability is far from harmonious is because Communist totalitarianism is constantly waging war against the rest of the world.

The continuity of this state of war was firmly stressed by Communist doctrine: "Only with the annihilation of capitalism and the victory of the socialist system throughout the world will wars cease, since the economic and political prerequisites for their eruption will disappear, [as will] the division of society into antagonistic classes."[12] Hence, according to Marxist doctrine, war is inevitable until Communism is victorious throughout the world, and Khrushchev's claims at the Twentieth Party Congress that war is not unavoidable does not alter the basic thesis, since he meant only that Communism can be established in some countries without a civil war or the interference of the Soviet Army, thanks to

[12] *Bolshaya sovetskaya entsiklopediya* (The Large Soviet Encyclopedia), Moscow, 2nd ed., 1951, XVIII, 572.

the increased strength of the Communist bloc in general and local Communist parties and "socialist forces" in the countries concerned. Khrushchev still considers that this is impossible in countries where capitalism is firmly entrenched. Force will have to be used.

The fact that the Communist system considers itself constantly at war with the rest of the world is predetermined by the Communists' view that the coexistence of two different systems is a temporary situation.[13] Hence, the Soviet Union, even if not always at war in the direct sense of the word, is always feverishly preparing for a conflict of one sort or another, preparing the way for success by a cold, psychological, or economic war, or by gradual infiltration.

As a result, the whole Soviet state system is adjusted primarily to meet military demands, and is on a permanent wartime footing. The history of the Soviet five-year plans can be appreciated only when these military demands are understood. Bearing in mind the link between war and technological progress it is obvious that the Soviet leaders have an advantage in this situation as far as the opportunity for further progress is concerned. The significance of this advantage becomes even clearer if we remember the achievements of the last two world wars. These achievements, which culminated in the practical application of atomic energy, were made almost exclusively by the non-Communist world. An outstanding example was America's contribution during World War II, made at a time when her economy had not been completely turned over to military needs. The qualitative and quantitative growth in production and in technological progress was enormous.

However, when the West reverted, at the end of the war, to a normal peacetime economy, the Soviet Union remained on a wartime footing, making the opportunities for technological progress different for the two opposing sides. Soviet scientific progress continues to be whipped up by constant preparations for a new war, while military research and production continue to take precedence over even the most modest peacetime requirements. As during the war, Soviet technological and economic development continues to ignore both the principle of profit and the need for economy. A totalitarian dictatorship can direct scientific development in accordance with a fixed plan, as well as concentrate on particular areas of importance, regardless of other demands. Thus, the ballistic missile was built and the satellites launched during an acute shortage of such basic consumer goods as food, clothing, footwear, and housing.

Thus, the link between war and technological progress, coupled with the Soviet economy's military footing, was a major factor in Soviet scientific success. The other features, noted by Dedijer and Sir Ashby, merely offered support.

A comparison of the non-Communist world's position in the enforced competition with that of the totalitarian states shows that the main difficulty facing the former, particularly America, is that to make up the technological lag in several branches of military science by going over to a wartime economy and authoritarian planned control in peacetime, technically the simplest and most

[13] *Ibid.*, p. 258.

effective solution even for the democracies (as the two world wars show), might lead to the establishment of a permanent authoritarian system. This would make a mockery of the struggle against Communism for the freedom of man and society. Therefore, the free world's basic need is to find within the framework of democracy means of controlling the masses and the state apparatus, which, while retaining the individual's freedom, would ensure that the tasks set modern society by the technical nature of the age would be fulfilled.

It is outside the scope of the present article to evaluate the non-Communist world's prospects or to try to find ways of solving this vital problem, on whose solution the question of whether it can remain free and guard against Communist aggression at the same time depends. An analysis of the Soviet general social and economic situation, however, will reveal the reverse side of the Soviets' success story, indicating that ways of solving the problem do exist. Communist domination of the masses, the merciless exploitation of those who paved the way for the present technological feats, is undergoing a serious crisis, which is tending to become ever more acute. Society in general is beginning to show lack of obedience and a desire to escape from the Communist leaders' influence.

> While Soviet science and technology would appear to be irresistibly striding to more and more new successes, there are increasing signs that something irrational . . . is threatening to penetrate the Communist rational scheme [in an area] in which until recently they felt themselves most secure. The domination of the masses is endangered. They are threatening to slip from the Communist grasp.[14]

These words contain a true estimation of the struggle of the enslaved masses for their freedom and rights as human beings, as shown both by events in Poland, Hungary, and the other satellites on the one hand and the internal crises in the USSR, the economic difficulties which caused the reorganization of industrial administration and the discarding of the Sixth Five-Year Plan, and the hurried attempt to win over the masses again by the success of the artificial satellites on the other. Thus, although the USSR has made undoubted technological progress, it is only at the cost of a growing mood of depression among the masses, worn out by constant exertion and exploitation in the name of Communism.

[14] *Der Spiegel*, Hamburg, No. 46 (1957), p. 32.

The Organization and Administration of the Soviet Armament Industry

JOSEPH J. BARITZ

Heavy Industry, the Foundation of the Soviet Military Economy

The development of the Soviet armament industry has always been closely associated with the policy of giving heavy industry top priority in economic development. Lenin considered that, as a matter of Party policy, the creation of a heavy industry justified any expense or sacrifice.[1] Stalin, implementing this policy, declared that "it was necessary to make sacrifices and to carry out the strictest possible economy everywhere; it was necessary to economize on food and schools and manufactured goods in order to accumulate the means needed for the creation of industry. . . . Lenin taught us this, and we have followed in Lenin's footsteps."[2] The present Party leaders also subscribe to this policy, and there is no end to their declarations that their main job at home is to concentrate on the development of heavy industry, which they regard as the foundation of Soviet military and economic might.

The First Five-Year Plan (1928—32) envisaged a rapid increase in military production. The directives of the October 1927 plenary session of the Party Central Committee pointed out that "it is essential in working out the five-year plan to devote maximum attention to the fastest possible development of those branches of the economy in general and to industry in particular which play the main role in ensuring the country's defense and economic stability in time of war."[3] The decisions of the Sixteenth Party Congress in 1930 stated that "the forced development of those branches of industry increasing the defensive ability of the Soviet Union is a task of paramount importance."[4] During the period from 1929 to 1941, of the approximately 200 billion rubles—in current prices—invested in Soviet industry, about 170 billion, or 85%, went into the heavy and armament industries.[5]

From 1930 to 1939 the Soviet armament industry increased the amount of equipment in the hands of the armed forces as follows: heavy, medium, and light

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[1] V. I. Lenin, *Sochineniya* (Works), Moscow, 4th ed., 1951, XXXII, 389—90.

[2] J. V. Stalin, *Voprosy leninizma* (Problems of Leninism), Moscow, 11th ed., 1953, p. 526.

[3] *KPSS v rezolyutsiyakh i resheniyakh tezdov, konferentsii i plenumov TsK* (The Communist Party of the Soviet Union in Resolutions and Decisions of Congresses, Conferences, and Plenums of the Central Committee), Moscow, 1953, Part 2, p. 277.

[4] *Ibid.*, p. 585.

[5] E. Y. Lokshin, *Ocherk istorii promyshlennosti SSSR* (An Outline of the History of Soviet Industry), Moscow, 1956, p. 276.

artillery, almost 7 times; all types of tanks, 43 times; tank and antitank guns, 70 times; all types of airplanes, 6.5 times; heavy and light machine guns, 5 times. The tonnage of the navy increased 2.3 times (approximately 500 new warships were built).[6] Thus, even in the initial period of industrialization Soviet heavy industry was given the task of building up military production to such an extent as to ensure the equipping of the constantly growing Soviet armed forces.

During World War II almost the whole of Soviet heavy industry and a large number of light industrial plants were assigned to the mass output of war materials. Soviet sources state that during the last three years of the war Soviet industry produced an annual average of 30,000 tanks, self-propelled guns, and armored cars, about 40,000 aircraft of all types, about 120,000 guns of all calibers, approximately 450,000 heavy and light machine guns, more than three million rifles, about two million submachine guns, about 100,000 mortars, and a large quantity of ammunition of various types. In 1944 alone 7.4 billion cartridges and more than 240 million shells, bombs, and mines were manufactured.[7] During the war artillery of all types increased in comparison with the prewar period more than 5 times; the number of tanks, 15 times; and the number of airplanes of all types, 5 times.[8]

During the war the development of production for military purposes was far ahead of the development of heavy industry as a whole. Only in 1944—45 did the latter begin to overtake the rate of development of military production.[9] After the war the Kremlin planned not only the restoration of the economy, but also the further development of the heavy and armament industries. The Soviet leaders set about reorganizing and re-equipping the armed forces. Production of new types of artillery armament, tanks, airplanes, and other forms of military equipment began. The program for the Navy was very extensive, with emphasis on the production of submarines and cruisers. There was feverish work on the designing and production of nuclear weapons and missiles. The then Soviet Minister of Defense Marshal Zhukov stated at the Twentieth Party Congress in February 1956 that the building up of the Soviet armed forces was being carried out in accordance with the nature of future wars, in which missiles, nuclear, chemical, and bacteriological weapons, and also large land, air, and sea forces would be used.[10]

Noteworthy is the fact that, while the Soviet political leaders attempt to present this development as essential both for the strengthening of military power and for the development of all other branches of the economy in their official statements and decisions on the priority of heavy industry development, the

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[6] Colonel S. N. Kozlov, *Vooruzhenie armii—odin iz postoyanno deistvuyushchikh faktorov, reshayushchikh sudbu voiny* (The Army's Weapons—One of the Constant and Decisive Factors in War), Moscow, 1954, p. 21; *Voprosy ekonomiki*, No. 5 (1955), p. 14.

[7] *Voprosy ekonomiki*, *op. cit.*, p. 17.

[8] Colonel S. N. Kozlov, *op. cit.*, p. 23.

[9] *Voprosy ekonomiki*, *op. cit.*, p. 20.

[10] *Pravda*, February 20, 1956.

military leaders, including Konev, Vasilevsky, Sokolovsky, have not tried to conceal the fact that this development is mainly intended to increase the country's war potential.[11]

The policy of creating the greatest possible military potential in the shortest possible period has prevented a well-rounded development of the Soviet economy, and Soviet figures show that the disproportion between the rates of growth of light and heavy industry is extremely great. For example, in 1956 the production of capital goods was 67 times greater than in 1913; including output of machine tools and the metalworking industry it was 180 times. On the other hand, consumer goods production in 1956 was 12 times greater than in 1913.[12] The Sixth Five-Year Plan (1956—60) did not envisage any changes in this disproportion. Total capital investments in this period (990 billion rubles) were split up as follows: heavy industry including armaments, 54.6%; agriculture, 12.1%; the light and food industries, 6%; transportation, communications, housing, and buildings for cultural purposes, 27.3%.[13] Khrushchev's campaign to better American per capita production of meat, milk, and butter within the next three years will not alter the position. The Party organ *Kommunist* remarked that "this [growth in the production of meat, milk, and butter] will be achieved by transferring resources from heavy industry into agriculture, and by mobilizing internal resources."[14] The recent declaration on a seven-year plan for the period 1959—65 further stressed the primacy of heavy industry over all other branches of the Soviet economy.[15]

The Principles of Industrial Organization

The Soviet armament industry is closely intertwined with the other branches of the economy. This is designed, on the one hand, to create and maintain a trained and well-equipped production base for the armed forces able to satisfy their current needs as well as create reserves ready in case of mobilization. On the other hand, it means that most of the country's industrial enterprises can be turned over to military goods production at short notice.

Such calculations naturally take into consideration the fact that many branches of industry, particularly of heavy industry, are readily adaptable to the production of a wide range of military supplies. This is particularly true of the enterprises of the metallurgical, machine building, machine-tool, instrument manufacturing, optical, tractor, automobile, agricultural implement and machinery, chemical, metalworking, woodworking, and other industries. For example, during World War II, agricultural machinery factories were transferred to the People's Commissariat for Military Supplies; not only the corresponding munitions factories, but also many machine building and instrument manufacturing works and

[11] *Ibid.*, May 8 and 9, 1955; *Izvestia*, February 23 and May 8, 1955.
[12] *Pravda*, June 12, 1957.
[13] *Ibid.*, February 22 and March 18, 1956.
[14] *Kommunist*, No. 11 (1957), p. 19.
[15] *Pravda*, September 26, 1957.

the like were transferred to the newly created people's commissariats for the tank industry and mortar production.[16] On this subject *The Large Soviet Encyclopedia* comments as follows:

> With the aim of increasing the armament industry reserve it is expedient to develop that peacetime production which can easily be switched over to work for military purposes . . .
>
> A "reserve" war industry group of factories must include all enterprises capable of preparing armaments and supplies, and not included in the permanent group . . .[17]

There are, in addition, military shops (or, as they are still called, "special" shops) in some enterprises which produce, in peacetime, depending on their specialization and planned tasks: (1) Ready military products and equipment; (2) component parts, armaments of various types, and military equipment; (3) semi-finished products, materials, and the raw material for military products; (4) equipment, machine tools, and instruments for the armament industry. These "special" shops either work permanently on military production or fill single military orders.

An example of how concentrating on the arms build-up affects other branches of the economy is furnished by the Soviet fishing industry, which suffers from an acute shortage of transport vessels, as a result of which the fishing boats themselves are frequently idle. There is also a shortage of repair shops; a result is that only one third of the ships in need of repair can be accepted for overhaul. Plans for the construction of new repairing facilities, wharves, and workshops are not compiled in accordance with the needs of the fishing fleet.[18] At the same time the fulfillment of the naval construction program, intended to extend Soviet sea power as rapidly as possible, has made the Soviet Union the world's second naval power, possessing 400 submarines, 40 new cruisers, 180 destroyers, and a large number of small and auxiliary ships.[19]

The lion's share of metal production is used both directly and indirectly for military needs, for the production of armaments, and for the creation of strategic reserves. In October 1953 Mikoyan stated at a conference of trade officials that more aluminum was presently being set aside for consumer goods production than was produced in 1937.[20] But in 1937 production of aluminum amounted to only 38,000 tons. In 1950 production was 180,000 tons,[21] and in 1954, 330,000 tons;[22] an estimate for 1953 would be approximately 250,000 tons. Correspondingly, even during Malenkov's policy of sharply increasing consumer goods production, only about 15% of all the aluminum produced in the USSR was assigned to the light industry; the remaining 85% and all the aluminum imported from abroad was given to heavy industry or accumulated as a strategic reserve.

[16] V. Vlasov, *Sovetsky gosudarstvenny apparat* (The Soviet State Apparatus), Moscow, 1951, pp. 376, 400, and 406.

[17] *Bolshaya sovetskaya entsiklopediya* (The Large Soviet Encyclopedia), *BSE*, Moscow, 1st ed., 1928, XII, 206.

[18] *Izvestia*, January 19, 20, and 22, 1956.

[19] *Jane's Fighting Ships*, London, 1956—57.

[20] *Pravda*, October 25, 1953.

[21] D. B. Shimkin, *Minerals—A Key to Soviet Power*, Harvard University Press, 1953, p. 99.

[22] *Die Welt*, Hamburg, April 13, 1955.

The Soviet government pays much attention to increased production of nonferrous metals, particularly aluminum, magnesium, and molybdenum, all essential for military purposes. According to plan nonferrous metal production was to increase by 1960 in comparison with 1955 as follows: lead, 42%; copper, 60%; zinc, 77%; nickel, 64%; tungsten, 57%; molybdenum, 100%; magnesium, 110%; aluminum, 110%.[23]

The Sixth Five-Year Plan (1956—60) had also envisaged increased production of titanium, germanium, zirconium, niobium, tantalum, gallium, and other rare metals. Soviet specialists make no attempt to conceal the fact that extended mining of these metals is essential for the armament industry and allied branches of production, particularly in the manufacture of heat-resisting alloys used for aircraft, missiles, and atomic equipment. The production of these alloys was to increase, in comparison with 1955, six times by 1960.[24] Particular attention is being given to titanium—a metal which is extremely firm, light, refractory, and corrosion-resisting. Titanium alloys are used in aircraft, missiles, ships—particularly submarines—and tanks.[25]

Great efforts are being made to develop substitute products such as synthetic liquid fuel, synthetic fiber, synthetic rubber, plastics, and so on. Products which are withdrawn not only from industrial, but also from consumer use are often employed as raw material substitutes. Petroleum, of course, is a most important strategic product, furnishing gasoline as well as alcohol, rubber, plastics, and synthetic fibers. Coal, lignite, and even peat are used for the production of gasoline and alcohol.[26] Grain furnishes alcohol which is used in the production of synthetic rubber and plastics; edible fats furnish a number of chemicals.[27] In his report at the Twentieth Party Congress Khrushchev stated that during 1955 more than two million tons of grain, more than 700,000 tons of molasses, and about 400,000 tons of edible fats were used as industrial raw materials.[28]

When planning the location of industry in general and heavy industry in particular, Soviet political and military leaders are guided by considerations of military strategy. In practice, this means a tendency to transfer the center of those branches of the economy important from the military standpoint to the country's eastern regions and to decentralize industry. Soviet works on the economic aspect of this policy have elucidated these principles as follows:

> From the point of view of the country's defensive ability the unpractical nature of the pre-Revolutionary location of industry lies in the fact that the main mass of industry was situated close to the western border, which, in the event of a war, used to create a serious danger. . . . The Communist Party and the Soviet government have set the people the task of making a serious effort to carry out in the

[23] *Izvestia*, February 26, 1956.

[24] *Ibid.*

[25] Major General Moskovsky and Colonel Astashenkov (eds.), *Sovremennaya voennaya tekhnika* (Modern Military Equipment), Moscow, 1956, p. 269.

[26] E. Y. Lokshin, *op. cit.*, p. 290; Khromov, Arakelyan, and Vorobeva (eds.), *Ekonomika promyshlennosti SSSR* (The Economics of Soviet Industry), Moscow, 1956, pp. 305 and 307.

[27] *Izvestia*, June 5, 1955.

[28] *Pravda*, February 15, 1956.

shortest historical period shifts in the location of industry, to distribute it throughout the territory of our homeland, proceeding from the socialist principles of the location of productive forces and, in particular, from the interests of the country's defensive ability.[29]

The significance of such a location of productive forces has been characterized by Soviet economist S. Tokarev:

> A powerful metallurgical and machine building base in the eastern regions of the USSR has ensured for our armed forces the necessary quantity of arms and ammunition. The Urals acquired particularly great significance during the war years. It turned into the main forge of Soviet weapons, the main fortress of the defense industry.[30]

According to figures given by N. Voznesensky the Ural region alone accounted for 40% of all Soviet arms production during World War II.[31]

The relocation of the center of arms production and its heavy industry foundation to the east is illustrated by the following figures: coal mined in the country's eastern regions in 1928 comprised 19% of total production; in 1940, 36%; in 1954, about 50%; oil produced in the east in 1913 amounted to 2.9% of the overall total; in 1940, 12%; in 1954, more than 60%. Steel output in the east accounted for 21.3% in 1913, 32.3% in 1940, and more than 50% in 1954; electrical power, of relatively minor importance prior to World War II in the eastern regions, amounted to more than 40% of the national total in 1954.[32]

Realizing the vulnerability of the industrial centers to air attack, the Soviet leaders are, in addition to decentralizing industry, working to set up duplicate enterprises. A number of economic factors must be taken into consideration during the planning of the geographical location of industry, choice of regions, and points for the construction of new enterprises and reconstruction of old ones. They are (1) the demand for the product in question; (2) the availability of a permanent supply of raw material, fuel, and power; (3) labor costs; (4) capital expenditure on the construction and maintenance of an enterprise, including transportation, living accomodation, and communal expenses; (5) the cost of a product at the place of production and in the main regions using it. However, all of these economic factors are pushed into the background when considering the location of those industrial centers and branches of the economy which make up the Soviet armament industry potential and are of varying degrees of importance for waging war. Marshal Tukhachevsky wrote in 1928 that "the problems of distributing industry . . . are solved not only under pressure of current economic, but also future military needs."[33] Soviet economists presently interpret this thesis as follows:

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[29] E. Y. Lokshin, *op. cit.*, p. 308.

[30] *Kramaya zvezda*, December 1, 1955.

[31] N. Voznesensky, *Voennaya ekonomika SSSR v period otechestvennoi voiny* (The Soviet Economy During the Fatherland War), Moscow, 1948, p. 50.

[32] E. Y. Lokshin, *op. cit.*, pp. 312—3; Khromov, Arakelyan, and Vorobeva, *op. cit.*, pp. 183—5.

[33] *BSE*, *op. cit.*, p. 579.

> Defense needs demand the location of enterprises deep inside [the country], the creation of relatively dispersed industrial bases and duplicate enterprises situated in various parts of the country. In individual cases, when the need for the strengthening of the Soviet defensive ability does not coincide with other tasks of the location of industry, defense needs are of decisive significance.[34]

Soviet metallurgist and member of the Academy of Sciences of the USSR I. Bardin has reported, for example, that the creation of the Ural-Kuznetsk Combine in the early 1930's was part of strategic planning. He acknowledged that, from the standpoint of increasing the speed and profitability of metal production, plants should have been developed in the Donbas, Azov, and Dnepr regions. The building up of a metal industry in the little-developed eastern regions, although demanding much greater financial expenditure and meeting with great difficulties, creates instead an industrial base in the heart of the country, a distinct advantage in case of war.[35]

The Administration of the Armament Industry

As already mentioned earlier, the Soviet arms industry consists, in the Kremlin's view, of two basic groups of enterprises: the permanent, purely armament industry and the reserve. The latter includes all those enterprises which, in the event of a war, could be converted to produce all types of military equipment. The administration of the arms industry has always been built up in accordance with this division. Enterprises of the regular armament industry have their own special administrative organs, while the enterprises of the reserve are distributed throughout the various branch industrial administrations according to their basic peacetime production.

An example of how this works is as follows. The expansion of military goods led in 1939 to a division of the People's Commissariat for the Defense Industry into the following four commissariats: (1) the aviation industry, which included factories making airplanes, aircraft engines, and instruments; (2) ammunition, which combined factories producing all types of ammunition, powder, and explosives; (3) armaments, which combined plants producing all types of artillery and infantry armaments, and also factories producing optical instruments for military purposes; (4) the shipbuilding industry, including shipbuilding enterprises and factories producing naval equipment and instruments.[36]

Until World War II a branch of production such as the tank industry was not put under a special people's commissariat; a number of armament industry enterprises, in particular those manufacturing tanks, were and are still subordinated administratively to the corresponding branch administrations of heavy industry. At the beginning of the war, supplementary people's commissariats for tank and mortar production were formed; and both purely military enterprises and a number of other industrial enterprises, particularly for machine construction and

[34] Khromov, Arakelyan, and Vorobeva, *op. cit.*, pp. 168—9.

[35] I. Bardin, *Sotsialisticheskaya industrializatsiya SSSR i chernaya metallurgiya* (Socialist Industrialization of the USSR and Ferrous Metallurgy), Moscow, 1950, p. 27.

[36] *BSE*, 1st ed., 1939, XL, 199, 204, 220, and 222.

instrument making, were transferred to them. Simultaneously, all the remaining people's commissariats of the armament industry were supplemented with enterprises which in peacetime made up part of the arms industry reserve.[37] After the war the number of ministries of the armament industry were reduced (the commissariats for tank, mortar, ammunition, and armament production were abolished); enterprises of the armament industry reserve and a number of purely military enterprises and shops were again transferred to the corresponding industrial ministries, while the regular armament industry was concentrated in three ministries: the aviation, defense, and shipbuilding industries. When the Soviet government worked out an extensive plan immediately after the war for the restoration of damaged factories and the building of new armament factories and easily convertible plants it created a special ministry for the construction of military and naval enterprises. This ministry, which existed from 1946—49, was given control of building organizations and enterprises of the other ministries of heavy industry, and also of similar MVD organizations.[38]

The economic reorganization of May—June 1957 transferred all the enterprises of the armament industry and other industries linked with it to the control of the economic councils (sovnarkhozes).[39] These enterprises are divided among the branch industrial administrations of the sovnarkhozes. This distribution took on different forms in each of the sovnarkhozes. For example, according to *Pravda* of April 5, 1957, the Moscow city sovnarkhoz includes, among other administrations, an administration for the aviation industry. The Leningrad sovnarkhoz, which combines the enterprises in Leningrad itself, and in Leningrad, Novgorod, Pskov, and Vologda oblasts, has an administration for the aircraft and shipbuilding industry. Of interest is the presence in it of two administrations for machine building with no indication as to which enterprises they will control: machine building and general machine building.[40] The Gorky sovnarkhoz contains administrations for the shipbuilding and defense industries.[41] The Moscow Oblast sovnarkhoz does not have, in name at least, one administration for enterprises working for military purposes, but three interrelated administrations: heavy and transportation machinery building, the electrical industry and instrument making, and machine building.[42]

It is clear on the basis of the structure of the sovnarkhozes that both the regular armament enterprises and those of the reserve are mainly split up among the branch administrations of the sovnarkhozes—the administrations for the machine building, instrument making, chemical, radio, and electrical industries, and so on; these administrations have corresponding departments for the armament industry. Those sovnarkhozes containing a large group of permanent arms enterprises now have separate administrations for them.

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[37] V. Vlasov, *op. cit.*, pp. 376 and 406.
[38] *Ibid.*, pp. 399 and 405.
[39] *Bulletin*, Munich, June 1957, p. 9.
[40] *Pravda*, April 8 and 13, 1957.
[41] *Ibid.*, May 6, 1957.
[42] *Ibid.*, May 7, 1957.

Khrushchev has stated that on-the-spot control of armament enterprises will be exercised by the sovnarkhozes. However, the ministries controlling these enterprises are also being preserved in order not to weaken centralized supervision of the industry's development. They are the aviation, defense, shipbuilding, radio, chemical, and medium machine building ministries.[43]

The preservation of the Ministry of Medium Machine Building (the ministries for machine building and heavy machine building have been abolished) points to a particular, but evidently strictly secret role. The supposition that this ministry controls the atomic industry has been obliquely confirmed. *The New York Times* Editor Turner Catledge questioned Khrushchev as to whether the Ministry of Medium Machine Building occupied a position similar to that of the United States Atomic Energy Commission; Khrushchev stated that this was possibly so.[44] In July 1957 E. Slavsky was appointed Minister of Medium Machine Building; he had been Head of the Chief Administration for the Use of Atomic Energy.

Explaining why the ministries responsible for the war industry had not been abolished, Khrushchev stated that they would be maintained until the planned transition to the new forms of administration had been carried out. In other words, it has been decided to wait before abolishing the ministries responsible for the most important military branches of industry until the results of the present experiment with industrial reorganization are available. The following functions have been given to the ministries preserved: (1) planning the development of the branch in question—capital investments and the volume of output of a given product, both as a whole and for the economic regions; (2) working out technical questions concerning the development of a given branch; (3) drawing up plans for research and design; (4) supervising plan fulfillment.

The creation of the sovnarkhozes has led to on-the-spot administrative and technical control of production; the Soviet government is counting on making the exploitation of the country's natural resources more efficient. Moreover, such an organization of industrial administration makes it possible for the local Party organs—the republic, oblast, and krai committees—to exercise direct control over the fulfillment of industrial tasks in the economic regions. A *Pravda* article of May 17, 1957 left no doubt that the principle of centralized administration of those branches of industry which the Kremlin considers of paramount importance, in particular the armament industry, is to be maintained *in toto*.

> The new forms of administration will enable centralized state control of the economy to be strengthened even more.... The new forms of control of the economy mean not a weakening but a strengthening of the plan basis.... Gosplan of the USSR is to follow a single, centralized policy in the development of the most important branches of the economy.... The new forms of industrial administration, with a considerable increase in the role of Gosplan of the USSR, a centralized system of accounting, statistics, finance, and technological leadership, will have a beneficial influence on the further growth of socialist industry.

[43] *Ibid.*, May 11, 1957.
[44] *Ibid.*, May 14, 1957.

The Soviet government has decided to use various means to root out any danger of a possible lack of interest in the development and maintenance of heavy industry. One of these is financial supervision. Soviet Minister of Finance Zverev wrote:

> Such a situation cannot be permitted when the resources earmarked by the state plan for the development of heavy industry are actually directed to other projects which can normally utilize these resources more easily. . . . Therefore the financial system will be obliged to ensure strict supervision of the assignment of resources intended for capital investment by branch and for special purposes.[45]

Thus, with the preservation of an overall system of centralized planning, finance, provision of equipment, the distribution of raw material, fuel, manpower, and so on and also with the maintenance of special central organs for the administration of the war industry, the latter remains not only the source intended to satisfy the Soviet armed forces' current demands and to supplement reserves ready for mobilization, but also the center, the nucleus, around which the Soviet leaders are constantly creating enterprises and entire branches of the armament industry reserve, increasing the country's military potential in every possible way.

[45] *Ibid.*, April 29, 1957.

CURRENT SOVIET AFFAIRS

The Economy

Forty Years of Soviet Industry: Retrospect and Prospect

A considerable part of Khrushchev's speech at the session of the Supreme Soviet of the USSR held on November 6, 1957 in celebration of the fortieth anniversary of the October Revolution was given over to the Soviet economy. In essence, Khrushchev reported on some of the successes achieved by the Soviet Union during the last forty years and cast a glance into the future to see what things would be like in another 15 years. His view of the past and his predictions for the future were generally optimistic and the figures he quoted were undoubtedly chosen to substantiate his optimism. The importance of heavy industry and its primacy over the consumer goods industry were once more reiterated. This is clear from the following table, which gives the absolute and per capita figures for the output of certain key industrial products in the USSR:

Production of Selected Industrial Items 1913—56

	— TOTAL OUTPUT —					– OUTPUT PER CAPITA –			
	1913	1928	1950	1956		1913	1928	1950	1956
Steel (Million Tons)	4.3	4.3	27.3	48.6	Kilograms	27	26	148	239
Coal (Million Tons)	29.2	35.5	261.0	419.0	Kilograms	184	214	1,418	2,064
Petroleum (Million Tons)	10.3	11.6	38.0	83.8	Kilograms	65	70	207	413
Electric Power (Billion Kilowatt-Hours)	2.0	5.0	91.2	192.0	Kilowatt-Hours	13	30	496	946
Cotton Cloth (Million Meters)	2,672	2,678	3,899	5,500	Meters	16.8	18.2	21.1	27.0
Woolen Cloth (Million Meters)	108	87	155	268	Meters	0.7	0.5	0.8	1.3
Leather Footwear (Million Pairs)	60	58	203	290	Pairs	0.38	0.35	1.10	1.40

NOTE: Population Figures: 1913, 159 million; 1928, 166 million; 1950, 184 million; 1956, 203 million.

SOURCES: *Narodnoe khozyaistvo SSSR v 1956 godu* (The National Economy of the USSR in 1956), Moscow, 1957.

On the basis of these figures the index of growth for these years is as follows (1913=100):

	1928	1950	1956
Steel	96	548	885
Coal	129	771	1,122
Petroleum	108	318	635
Electric Power	231	3,815	7,276
Cotton Cloth	108	126	160
Woolen Cloth	71	114	185
Leather Footwear	92	289	368

While steel output has increased 785% in comparison with 1913, coal by 1,022%, oil by 535%, and electric power by 7,176%, production of cotton cloth has increased by only 60% over the last forty years. However, this increase is not a true reflection of the actual growth between 1913 and 1956; pre-Revolutionary statistics did not take into account home and other small-scale production, which was widely developed in Russia before 1917 and made up a considerable share of consumer goods production. Thus, it is probable that the amount of cotton and woolen goods and shoes available to the Soviet citizen on the eve of the fortieth anniversary of the October Revolution was only a little more than he had in 1913.

Soviet indices for these products are far behind those of the other highly industrialized countries of the West. In 1956 American per capita production of cotton cloth was 45 meters,[1] while Soviet output was only 27 meters; American production of woolen cloth per capita was 1.7 meters[2] as compared with a Soviet figure of 1.3 meters. Leather footwear figures were 3.4 pairs per capita of population in America[3] and only 1.4 pair in the USSR. The Soviet Union is lagging even further behind Britain in turning out woolen cloth; the latter produced six meters per capita of population in 1956,[4] or 4.7 times more than the USSR.

Khrushchev's figures for 1957 reveal Soviet industry's failure to reach the original planned goals for the Sixth Five-Year Plan. Even the later, reduced 1957 goals for pig iron, steel, rolled metal, and electric power will not be attained. The coal and oil industries will, however, fulfill their 1957 plan figures. The plan for electric energy will not be fulfilled in spite of the completion of the Kuibyshev Hydroelectric Power Station with its annual output of eleven billion kilowatt-hours. There will be a slight increase in light industrial production, but only in woolen cloth and leather footwear, which will barely cover the annual population increase. As in 1956 the plan for cotton cloth will not be fulfilled, although Khrushchev did not mention this fact in his report. The following table shows the 1957 figures for key branches of the Soviet heavy and light industries as envisaged in the Sixth Five-Year Plan, the reduced plan for 1957, and those announced by Khrushchev:

Changes in the 1957 Production Figures

	Original 1957 Target*	Revised 1957 Target	Expected 1957 Output
Pig Iron (Million Tons)	41.1	38.1	37.0
Steel (Million Tons)	54.5	51.5	51.0
Coal (Million Tons)	472.2	446.2	462.0
Petroleum (Million Tons)	96.4	97.0	98.0
Electric Power (Billion Kilowatt-Hours)	232.2	211.2	210.0
Cement (Million Tons)	35.5	28.5	29.0
Woolen Cloth (Million Meters)	296.0	278.0	280.0
Leather Footwear (Million Pairs)	338.0	309.4	315.0
Sugar (Million Tons)	4.70	4.76	4.50

* Based upon an annual growth of one fifth of the total increase for the five-year plan.

SOURCES: *Narodnoe khozyaistvo SSSR: Statisticheskiy sbornik* (The National Economy of the USSR: A Statistical Compilation), Moscow, 1956; *Pravda*, February 26, 1956; February 6 and November 7, 1957.

The lag in the expected results for 1957 behind both the goals of the Sixth Five-Year Plan and the reduced figures for 1957 is clear. The Sixth Five-Year Plan envisaged that pig iron output in 1957 would amount to 41.1 million tons.

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[1]) Based on information quoted from *Statistical Yearbook*, United Nations, 1956; *Survey of Current Business*, March, April 1957; *Wirtschaftsdienst*, February 1957 in *Ekonomicheskoe polozhenie kapitalisticheskikh stran v 1956—57 g.* (The Economic Position of the Capitalist Countries, 1956—57), p. 23: Supplement to *Mirovaya ekonomika i mezhdunarodnye otnosheniya*, No. 2 (1957).

[2] *Ibid.*

[3] *Ibid.*

[4] Based on information quoted from *Annual Abstract of Statistics*, 1956; *Monthly Digest of Statistics*; *Statistical Yearbook*, United Nations, 1955 in *Ekonomicheskoe polozhenie kapitalisticheskikh stran v 1956—57 g.*, *op. cit.*, p. 28.

However, this goal proved to be too ambitious, and on February 6, 1957 Pervukhin announced a reduced 1957 goal of 38.1 million tons. Now, Khrushchev's report has revealed that this new target will not be met by approximately one million tons.

Perhaps in order to conceal the present difficulties of Soviet industry, Khrushchev talked about prospects for the future. Skipping over the still unclarified goals of the Soviet Seven-Year Plan (1959—65), he gave some broad targets for industrial development over the next fifteen years. By 1972 the following overall production figures are envisaged:

	Production Goal for 1972	Estimated Production for 1957
Iron Ore (Million Tons)	250—300	84.0
Pig Iron (Million Tons)	75—85	37.0
Steel (Million Tons)	100—120	51.0
Coal (Million Tons)	650—750	462.0
Petroleum (Million Tons)	350—400	98.0
Natural Gas (Billion Cubic Meters)	270—320	20.0*
Cement (Million Tons)	90—110	29.0
Electric Power (Billion Kilowatt-Hours)	800—900	210.0
Woolen Cloth (Million Meters)	550—650	280.0
Leather Footwear (Million Pairs)	600—700	315.0
Sugar (Million Tons)	9—10	4.5

* Author's estimate.

SOURCE: *Pravda*, November 7, 1957.

If the above goals are to be attained a colossal and prolonged effort is going to have to be exerted over the next fifteen years. The targets, incidentally, were presented in the context of the Soviet aim of catching up with and surpassing the United States in the production of certain industrial and agricultural items. However, as Khrushchev announced, winning this race presupposes little or slight expansion of American industrial production during the fifteen-year period. Thus, even if as Khrushchev promises, Soviet steel output reaches 100—120 million tons in 1972, it must not be forgotten that American postwar steel output has already reached 115 million tons.[5] The USSR will only be able to approach the American figure if the latter's steel production remains the same over the period in question.

The situation is the same in other key branches of industry. Khrushchev promises to get 350—400 million tons of petroleum out of the ground in 1972. American production was 354 million tons in 1956 and promises to rise considerably in the next 15 years. Khrushchev's 800—900 billion kilowatt-hours of electric power in 1972 compares with American generation in 1956 of 684 billion kilowatt-hours.[6] A number of new major American power stations is going to add a significant amount to the 1956 figure.

It is possible that the Soviet Union will achieve an overall coal production figure of 750 million tons by 1972, that is, catch up and even overtake America. However, the latter has already reached a postwar figure of 700 million tons, and although 1956 output was only 479 million tons,[7] this does not imply a drop in

[5] *Pravda*, November 7, 1957.

[6] *Ibid.*

[7] *Ibid.*

the country's potentialities but rather a change in the structure of the sources of power; emphasis has been and is still being shifted from coal to oil, gas, and electricity, all more convenient to use.

In 1956 America produced 586 million pairs of leather footwear for a population of 172 million.[8] Thus, Khrushchev's 1972 figures of 600—700 million pairs will only surpass present American output. The USSR should overtake American production of woolen cloth and sugar, areas in which America has considered it more economical to import woolen cloth from Britain and sugar from Cuba and other Central American countries.

A brief look at the figures for the new fifteen-year period will soon show that the Soviet government and Party Central Committee are still concentrating on capital goods at the expense of consumer. Nevertheless, output increase over one five-year period of the fifteen years will be less than the actual growth of production during the Fifth Five-Year Plan and the planned increase during the Sixth Five-Year Plan.

Comparison of Soviet Industrial Growth over Selected Five-Year Periods

	Actual Increase 1951—55	Planned Increase 1956—60	Increase for Five-Year Periods Between 1958 and 1972*
Pig Iron (Million Tons)	13.9	19.7	13—16
Steel (Million Tons)	17.9	23.1	16—22
Coal (Million Tons)	130.0	203.0	63—96
Petroleum (Million Tons)	33.3	64.4	84—100
Cement (Million Tons)	11.9	32.6	20—27
Electric Power (Billion Kilowatt-Hours)	76.5	153.2	196—230
Woolen Cloth (Million Meters)	91.0	113.0	90—123
Leather Footwear (Million Pairs)	57.0	158.0	95—128
Sugar (Million Tons)	1.02	3.11	1.50—1.84

* Each item is one third of the figure given by Khrushchev for the 15-year period.

SOURCES: *KPSS v rezolyutsiyakh i resheniyakh sezdov, konferentsii i plenumov TsK* (The Communist Party of the Soviet Union in Resolutions and Decisions of Congresses, Conferences, and Plenums of the Central Committee), Moscow, 1953, Part II; *Pravda*, February 26, 1956 and November 7, 1957.

The only exceptions are the oil and electric power industries, which will develop at a faster rate than the speed envisaged by the Twentieth Party Congress for the Sixth Five-Year Plan. This is in keeping with a general tendency to shift from bulky, inconvenient coal to oil, gas, and electricity. A comparison of the increase in production in the Fifth and Sixth five-year plans with that marked out for the fifteen-year period reflects this new trend in the Soviet economy. In the Fifth Five-Year Plan the growth in coal production amounted to 130 million tons and the figure for the Sixth Five-Year Plan was put at 203 million tons. Khrushchev envisages an increase of only 63—96 million tons per five-year period over the next fifteen years. On the other hand, oil output, which increased 33.3 million tons during the Fifth Five-Year Plan and was to have increased by 64.4 million tons during the Sixth Five-Year Plan, will considerably exceed these figures if the 15-year goal is met. Khrushchev forecast an electric energy output of up to 800—900 billion kilowatt-hours by 1972, that is, an increase of

[8] *Ibid.*

196—230 billion kilowatt-hours over one five-year period, as compared with 76.5 billion kilowatt-hours for the Fifth Five-Year Plan and a planned increase of 153.2 billion for the Sixth Five-Year Plan. The above are not unrealistic if it is remembered that a large number of gigantic hydroelectric power stations at Bratsk on the Angara, and the two at Krasnoyarsk on the Yenisei, one with a planned capacity of six million kilowatts, will soon be put into operation. A series of hydroelectric power stations is to be built on the Volga, Kama, Dnepr, Ob, Irtysh, and Amur rivers together with a large number of thermal power stations in the country's eastern regions. The Soviet authorities are now emphasizing the use of natural gas as a fuel and new efforts are being put into exploration, drilling, and pipeline construction. Natural gases are destined to replace coal in many thermal power stations and in industrial enterprises.

A comparison of annual production increases during the Fifth and Sixth five-year plans and the actual growth for 1955, 1956, and 1957 with the increase envisaged over the period 1958—72 indicates a slow-down in Soviet industrial growth. According to Khrushchev the yearly increase in pig iron output is to range from 2.6 to 3.2 million tons, that is, less than the actual increase for 1955 (3.3 million tons) and the planned average for the Sixth Five-Year Plan (3.9 million tons), but more than the actual increase for 1956 and 1957—2.5 and 1.3 million tons respectively. Similarly, for steel the minimum figure envisaged is 3.2 million tons per year, that is, more than the last year of the Fifth Five-Year Plan (3 million tons), but the same as the first year of the Sixth Five-Year Plan (3.3 million tons). The maximum figure of 4.4 million tons per year is only slightly below the annual planned figure for the Sixth Five-Year Plan as a whole (4.6 million tons). This can be seen from the following table:

Comparison of Average Annual Increases in Production During Selected Five-Year Periods

	Average Annual Increase 1951–55*	Actual Increase for 1955	Planned Average Increase 1956–60**	Actual Increase for 1956	Estimated Increase for 1957	Annual Average Increase 1958–72•
Pig Iron (Million Tons)	2.8	3.3	3.9	2.5	1.3	2.6—3.2
Steel (Million Tons)	3.6	3.0	4.6	3.3	2.4	3.2—4.4
Coal (Million Tons)	26.0	43.9	40.6	28.0	49.0	12.6—19.2
Petroleum (Million Tons)	6.7	11.5	12.8	13.0	14.2	16.8—20.0
Cement (Million Tons)	2.4	3.5	6.5	2.4	4.0	4.0—5.4
Electric Power (Billion Kilowatt-Hours)	15.3	19.5	30.6	21.9	18.2	39.2—46.0
Woolen Cloth (Million Meters)	18.2	9.1	22.6	15.4	12.3	18.0—24.6
Leather Footwear (Million Pairs)	11.4	16.5	31.6	15.5	25.0	19.0—25.6
Sugar (Million Tons)	0.2	0.8	0.62	0.94	0.15	0.3—0.37

* Total increase for the five-year plan divided by five.
** Total planned increase for the five-year plan divided by five.
• Khrushchev's figures for the fifteen-year period divided by fifteen.

SOURCES: *KPSS v rezolyutsiyakh i resheniyakh sezdov, konferentsii i plenumov TsK* (The Communist Party of the Soviet Union in Resolutions and Decisions of Congresses, Conferences, and Plenums of the Central Committee), Moscow, 1953, Part II; *Pravda*, January 30 and February 26, 1956; January 31 and November 7, 1957.

Khrushchev's assurance that in the next five to seven years the population's needs for these goods will be met[9] is unrealistic. Thus, even if the speed of

[9] *Ibid.*

development over the next seven years is maintained the output of woolen cloth and leather footwear per capita of population will be considerably lower than in America and Britain in 1956. Even if the maximum annual increase of 24.6 million meters of woolen cloth is achieved and the USSR has an overall figure of 452 million meters per year by about 1964, or a round figure of 2 meters per capita (taking a population of approximately 220 million in 1964), Britain already had a figure of 6 meters per capita in 1956. A maximum annual production of 25.6 million pairs of leather footwear means that in seven years the USSR will reach an overall figure of 494 million pairs per year, that is, 2.24 pairs per capita as opposed to 3.4 pairs for America in 1956.

Outlining his fifteen-year plan Khrushchev stressed its tentative nature:

> This is a preliminary prognosis which may be adjusted by life in this or that direction. And most likely of all it may be adjusted in the form of a shortening of the periods for the fulfillment of the plans outlined. Even with our rich experience in the conducting of a planned economy it is difficult to envisage with absolute accuracy the production in various branches, particularly if we take into consideration the rapid development of modern science and technology, the future growth of our cadres which may give supplementary sources for the increased growth of social production.[10]

Typical is the fact that Khrushchev did not refer to the government or Party organ which had worked out the plan. He thus acted in the same manner as Stalin, when the latter, in a pre-election speech of February 9, 1946, personally made demands on Soviet industry for the next two to three five-year plans, that is, ten to fifteen years.[11] Over the past forty years the Kremlin has never been short of broad economic plans. The existence of the Sixth Five-Year Plan, the Seven-Year Plan, and tentative figures for the next fifteen years again reveals a plethora of long-range Soviet plans, and also difficulties in fulfilling them.

G. A. Vvedensky

The Average Income of Soviet Wage Earners

According to official Soviet statements, the country's national income is distributed between the categories of consumption and accumulation in such a way as to ensure the "maximum satisfaction of the constantly growing material and cultural demands of the whole of society."[1] This does not, however, mean that the Soviet government is making every effort to meet the demands of the population for consumer goods. Quite the contrary, a concomitant of Soviet economic development has been an extremely high rate of compulsory accu-

[10] *Ibid.*

[11] J. V. Stalin, *Rech na predvybornom sobranii izbiratelei Stalinskogo izbiratelnogo okruga g. Moskvy 9 fevralya 1946 g.* (Speech at a Pre-Election Meeting of Voters of the Moscow Stalin Electoral District on February 9, 1946), Moscow, 1946, p. 22.

[1] K. V. Ostrovityanov, D. T. Shepilov, and others, *Politicheskaya ekonomiya: Uchebnik* (Political Economy: A Textbook), 2nd ed., Moscow, 1956, p. 566.

mulation, involving the maximum mobilization of resources for industrialization and the creation of strategic reserves. This accentuation of capital goods production has been elevated to a "law of socialism," a direct result of which is a firm clamp on wages and, hence, the low standard of living of the average Soviet citizen is deliberately planned by the Communist leaders.

The annual reports issued by the Central Statistical Administration on plan fulfillment assert that roughly three quarters of the national income is destined for consumption. It is virtually impossible to check this figure directly because of the lack of information. However, figures for industry alone give a completely different picture. In 1928, consumer goods production comprised 60.5% of all industrial production (compared with 66.7% in 1913); in 1937 this had dropped to 42.2%; and by 1955 had declined to 29.4%.[2] Thus, an ever-increasing share of Soviet industrial output is used to create more industry or arms.

Workers and salaried employees together with their families comprise 58.3% of the Soviet population,[3] and their main, and in many cases, only means of support is their earnings. We know that prior to World War II wages made up approximately 68% of the population's income, but since 1939 no information on wages has been published. The statistical handbook *The National Economy of the USSR* does not give any data on the subject, and it is interesting to note, in this connection, that the section "Labor," which had been included in prewar publications of the same type, was missing.

Nevertheless, from time to time the Soviet press reveals some wage figures, although usually not reflecting the normal situation. For example, frequent mention is made of wages amounting to two or three thousand rubles a month, with the obvious intention of making it appear that such rates are common. Sometimes the reverse side of the medal is revealed. Thus, last year in connection with the decree issued on September 8, 1956 on minimum wage rates it was revealed that there were about eight million low-paid workers, whose earnings were raised from between 225 and 260 rubles a month to between 270 and 350. This group constituted approximately 16.5% of the total number of wage earners in 1955.

Western scholars have obtained different figures for the average Soviet workingman's wage. An Austrian parliamentary delegation which visited Russia at the end of 1955 put it at 900 rubles a month, presumably on the basis of the average wage paid in enterprises shown to foreign visitors.[4] The French economist Maurice Allais in a report to the Académie des Sciences morales et politiques in 1955 gave, on the basis of the annual subscription to the state loan, an average of 610 rubles per month.[5]

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[2] S. A. Bekunova, Y. S. Belenky, and others, *Teoriya statistiki* (The Theory of Statistics), 2nd ed., Moscow, 1956, p. 266.

[3] *Narodnoe khozyaistvo SSSR : Statistichesky sbornik* (The National Economy of the USSR: A Statistical Compilation), Moscow, 1956, p. 19.

[4] *Die Zukunft*, Vienna, January 1956.

[5] *Est & Ouest*, Paris, 16—30 June, 1956, p. 17. Solomon Schwarz, the American economist, however, reached a different sum (475 rubles) on the basis of the same material.

On the basis of the Soviet data available the 1956 average wage appears to have been somewhere between 700 and 800 rubles a month. The following table shows how wages and price indices changed between 1940 and 1956:

The Increase in Soviet Wages and Prices 1940—56

	Average Annual Wage	Average Monthly Wage	Wage Index	Real Wage Index*	Index of Prices of Goods and Services
			(1940 = 100)		
1940.....	4,100[1]	341.7	100	100	100
1950.....	—	—	—	126[5]	—
1951.....	7,550	629.2	184	—	—
1952.....	8,079[7]	673.3	197	—	—
1953.....	8,241[8]	686.8	201[2]	165[2]	122[2]
1954.....	8,446[9]	703.8	206[3]	174[3]	118[3]
1955.....	8,699[10]	724.9	212	175[4]	121
1956.....	8,960[11]	746.7	219	182[6]	120

* The relationship of wages to the index of prices of goods and services.

SOURCES: The table has been calculated on the basis of information from the following:

[1] *Bolshaya sovetskaya entsiklopediya* (The Large Soviet Encyclopedia), 2nd ed., Moscow, 1947, Vol. "USSR," p. 1117.
[2] K. V. Ostrovityanov, D. T. Shepilov, and others, *Politicheskaya ekonomika: Uchebnik* (Political Economy: A Textbook), 1st ed., Moscow, 1954, p. 462.
[3] *Ibid.* 2nd ed., 1955, p. 483.
[4] *Narodnoe khozyaistvo SSSR: Statistichesky sbornik* (The National Economy of the USSR: A Statistical Compilation), Moscow, 1956, p. 37.
[5] *Ibid.*
[6] *Voprosy ekonomiki*, No. 7 (1957), p. 20.
[7] *Pravda*, January 23, 1953.
[8] *Ibid.*, January 31, 1954.
[9] *Ibid.*, January 31, 1955.
[10] *Ibid.*, January 30, 1956.
[11] *Ibid.*, January 31, 1957.

A further indication that the average Soviet wage is between 700 and 800 rubles a month are figures given by a railroad statistical handbook for one of the Soviet networks:

	Number of Workers (Thousands)	Average Monthly Wage (Rubles)		Number of Workers (Thousands)	Average Monthly Wage (Rubles)
1950.....	46.6	714	1953.....	50.0	730
1951.....	47.6	727	1954.....	51.0	744
1952.....	49.9	721	1955.....	51.6	758

SOURCE: V. N. Shvetsov, *Statistika truda na zheleznodorozhnom transporte* (The Statistics of Labor in Railroad Transportation), Moscow, 1956, p. 157.

Furthermore, *Kommunist Ukrainy* reported that in 1956, 200,000 administrative and other nonproductive personnel were discharged with a saving of 1.7 billion rubles a year.[6] If all the saving is in salaries this gives a monthly average of 708 rubles per person.

As for the family budget, detailed figures were last given during the New Economic Policy period, although of late relatively detailed information has begun to appear again. For example, *Sotsialnoe obespechenie* recently published an article entitled "A Pensioner's Family Budget," giving figures for a family of three adults living in Kalinin.[7] After all deductions the family's income amounted to 1,648 rubles a month: two pensions of 495 and 503 rubles plus earnings of 650 rubles. The main item of expenditure was food (1,151 rubles or 70% of the budget), while rent, transportation, recreation, utilities, and other everyday expenses amounted

[6] *Kommunist Ukrainy*, Kiev, No. 2 (1957), p. 8.
[7] *Sotsialnoe obespechenie*, No. 5 (1957), pp. 17—22.

to 200 rubles or 12%. This left an inadequate 297 rubles for all other expenses including clothing, shoes, and household goods. In seven months the family bought two coats, one for winter and one for the fall, a dress, and material for a suit, for a total of 2,650 rubles, 571 rubles in excess of the budget for the period. To account for the difference the author glibly explains that "each family has its reserves—savings and economies on purchases."[8] It is more probable that there was skimping on food.

Food makes up a very high share of expenditures. In 1913 it compromised only 50% of the workingman's budget, and dropped as low as 44% in 1927, before swinging to reach the present figure of 70%. Since 1913 the structure of expenditures has changed considerably, as can be seen from the following table:

Changes in the Structure of the Soviet Worker's Expenditure 1913—57

(Percentage of Total Budget)

	1913	1927	1957
Food	50.0	43.8	69.7
Rent and Utilities	20.0	17.0	2.2
Clothing	10.0	22.4	18.2
Recreation	3.6	4.0	5.5
Other Household Expenses	7.0	4.2	2.6
Transportation	—	—	1.8
Aid to Family	1.1	1.2	—
Miscellaneous	8.3	7.4	—

SOURCES: *Sotsialnoe obespechenie*, No. 5 (1957), p. 22; S. N. Prokopovicz, *Narodnoe khozyaistvo SSSR* (The National Economy of the USSR), New York, 1952, II, 72—4.

The budget for the current year reflects a very modest living standard. Thus, the food may yield the necessary number of calories (about 4,000 a day), but 47% of them would come from bread and macaroni products. There seems little doubt that the amount allocated to rent, utilities, and clothing is completely inadequate, the sum available for these items being determined not by probable needs but by the amount left after the essentials have been paid for.

The size of the average Soviet family is not known at present, but a postwar estimate of 3.6 persons has been made.[9] However, the number of dependents per worker between 1952 and 1955 can be seen from the following table:

Composition of the Families of Selected Industrial Workers

(In Percentages)

	1952	1953	1954	1955
Workers	49.0	48.6	48.3	48.1
Working Pensioners	1.9	2.6	3.2	3.2
Nonworking Pensioners	5.8	5.8	5.1	4.4
Students Receiving Grants	0.6	0.6	0.6	1.0
Dependents	44.6	45.0	46.0	46.5
Dependents per Worker	0.91	0.93	0.95	0.97

NOTE: This table is based on a Central Statistical Administration's sampling of a group of 14,800 workers' families.
SOURCE: *Vestnik statistiki*, No. 1 (1957), p. 86.

[8] *Ibid.*, p. 21.

[9] S. N. Prokopovicz, *Narodnoe khozyaistvo SSSR* (The National Economy of the USSR), New York, 1952, II, 136.

This indicates a slight improvement of late in the financial position of these families. The size of the family and the number of dependents per worker are extremely sensitive to changes in the level of the real wage index. From 1929, when the real wage level in the Soviet Union began to fall, the worker's family began to decrease in size and the number of dependents per wage earner dropped off, and only recently has the trend been halted. This is illustrated by the following table:

	Average Size of Worker's Family	Number of Dependents per Worker
1927.....	4.10	2.20
1932.....	3.93	1.73
1935.....	3.80	1.59
1952.....	—	0.91
1955.....	—	0.97

SOURCE: S. N. Prokopovicz, *Narodnoe khozyaistvo SSSR* (The National Economy of the USSR), New York, 1952, II, 122; *Vestnik statistiki*, No. 1 (1957), p. 86.

It is easy to obtain an approximation of how much a worker would have to earn to support himself and his dependents. According to budget data the absolute essentials amount to 451 rubles per person (384 rubles for food and 67 rubles for other essentials); the above table shows that each worker has to support 0.97 dependents. Hence, the minimum amount of money required each month amounts to $451 \times 1.97 = 888.5$ rubles. Since deductions from earnings average 15% the ordinary worker's wages would thus have to be not less than 1,045 rubles. However, the table on page 29 shows that wages average only 746.7 rubles a month, which means that the Soviet wage-earner receives only 72.4% of the minimum required to cover food and other essential expenses.

Moreover, it must be remembered that the average wage index gives only a rough indication of the true state of affairs, particularly in the Soviet Union, where there is an exceptionally large differential between maximum and minimum rates. The range is from 300 to 3,000—5,000 rubles, but about 8,000,000 workers receive less than half the average wage, while at least half the working population receives less than or about the average.

In view of this, the question inevitably arises as to how these people get the money to live. The answer is that they have to find a source of income over and above what they earn from their eight-hour day. Some work overtime at factories, the majority spend every spare moment working small, private plots of land. Urban working families usually keep a cow, a goat, and a pig and raise their vegetables, particularly potatoes, on the plots, situated far outside the city limits. These private plots are a great help to the workers and their families and for a long time the Soviet government encouraged town dwellers to develop them. The importance they attained can be judged from the fact that in 1955, 12% of the land sown to vegetables (mainly potatoes) and cucurbitaceous plants was cared for by workers, who also kept 15% of the cows and 12% of the hogs. The development of this type of private farming can be seen from the following table:

Production on Workers' Private Plots

	Land Sown (Million Hectares)	Cattle	Hogs	Sheep	Goats
		(Thousands)			
1930.....	0.04	161	221	—	—
1933.....	0.49	389	729	—	—
1953.....	—	6,509	6,035	2,478	5,068
1954.....	1.47	6,875	6,589	2,988	5,007
1955.....	1.59	7,642	6,596	3,806	4,920

SOURCE: S. N. Prokopovicz, *Narodnoe khozyaistvo SSSR* (The National Economy of the USSR), New York, 1952, II, 124; *Narodnoe khozyaistvo SSSR: Statisticheskyi sbornik* (The National Economy of the USSR: A Statistical Compilation), Moscow, 1956, pp. 108, 119—20.

On August 28, 1956 a law was passed directed at, if not abolishing, at least at drastically curtailing livestock holding by workers. The decree admitted that the reason for this sharp about-face in Party policy was the fact that workers were neglecting their factory jobs and putting more time in on private animals and land.[10]

The low-paid categories of wage earners are forced to turn for assistance to the administration of the factories where they are employed. When their requests are met, they are permitted to buy from special enterprise funds goods at cost or at a discount, although this practice is condemned by the government. The administrative staff also frequently takes advantage of such purchases at reduced prices. The acute need of many workers also leads to theft of state property. The average man does not even consider it a crime to steal from the state.

The wage increases granted the lower-paid workers, the increased pensions, the curtailment of the working week by two hours, the rescission of the law governing absenteeism and tardiness, and the increase in agricultural output, all described as great achievements by the Soviets, were in fact concessions more or less forced on the government. They have slightly improved the workers' standard of living, which nevertheless remains low. This is due to the rate of industrialization and the nature of capital investments, which are made primarily to develop the means of production. The present Party leaders have no intention of altering either the speed at which industrialization is being carried out or the nature of the capital investments; on the contrary, they are doing their utmost to make them irrefutable "laws" of socialist development. Hence, in spite of all Khrushchev's assertions and promises, there are no grounds for anticipating an appreciable improvement in the Soviet worker's standard of living. *F. S. Gaenko*

The Estonian Oil Shale Industry

Oil shale is the most important natural resource of the Baltic region and of considerable importance to the northwestern Soviet Union as a source of fuel. As a result, since World War II the Soviets have been showing increased interest in exploiting Estonia's oil shale deposits.

Two kinds of oil shale are found on the Estonian northern coast: kukersite and dictyonema shale. Kukersite is found in several deposits of 0.3 to 0.5 meters thick in the area between Paldiski and the River Narva. In some places, near

[10] *Pravda*, August 28, 1956.

Viivikonna for example, it lies quite near the surface. However, at present mining is profitable only in the area bounded by Rakvere, the Gulf of Finland, and Lake Peipus. Here industrially exploitable deposits cover an area of about 3,000 square kilometers and contain approximately 5.5—6.0 billion tons of kukersite. As the oil content of this shale is between 20 and 22% the deposits represent an oil reserve of over a billion tons. Kukersite of similar quality also occurs east of the River Narva in Leningrad Oblast, where there are known deposits at a depth of 40—145 meters in Gdov, at a depth of 50—70 meters in Veimarn, and at a depth of 180 meters in Luga-Volossovo and Chudovo. In the last two places, however, mining is almost impossible due to flooding.[1] As far as is known, the Gdov deposits are being exploited in the town of Slantsy, where some small mines and an oil refinery are working and where in June 1954 a plant producing gas for home consumption was built. This plant, which consumes nearly two million tons of kukersite a year, supplies Leningrad with up to one million cubic meters of gas a day.[2] The kukersite deposits of Estonia and Leningrad Oblast are usually referred to as the Baltic Sea oil shale basin.

Beneath the Estonian kukersite deposits and in the western part of the northern coast there are vast quantities of dictyonema shale, found in layers up to six meters thick and, in some places, quite near the surface. This shale could be quarried over an area of about 4,000 square kilometers, but as its oil content is very low no attempt has been made to exploit it to date, nor has detailed prospecting been carried out to determine exactly how much of it there actually is.[3] However, according to recent information the Soviet Union has now begun experiments aimed at extracting uranium from this shale, presumably on the Swedish model. Soviet interest appears to be concentrated on Maardu, near Tallinn, where considerable quantities of dictyonema shale are now being excavated together with phosphorite from the mine belonging to the Maardu Chemical Combine.[4] Should these experiments prove that practical exploitation is possible, this dictyonema shale may well prove to be an important raw material for Soviet uranium production.[5]

In addition to the deposits in Estonia and Leningrad Oblast the USSR also has oil shale in the basin of the Volga and its tributaries (excavations have already begun on a limited scale in Kashpir, Buinsk, Savelev, and Undarovo), in Komi ASSR, Archangelsk, and, together with coal, in Irkutsk Oblast, Krasnoyarsk Krai, and Tkibul in Georgia.[6] This cannot compare with Estonia, however,

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[1] A. Aarna and others, *Polevkivi*, Tallinn 1954, pp. 41—4; *Eesti*, Geislingen, Vol. II, 1949, pp. 70—1.

[2] *Rahva Hääl*, Tallinn, June 29, 1954; April 9 and 11, 1957.

[3] A. Aarna, *op. cit.*, p. 43; E. Bölau, *Eesti riik ja rahvas teises maailmasojas*, Stockholm, Vol. I, 1954, p. 110—13; *Rahva Hääl*, April 7, 1957.

[4] *Rahva Hääl*, February 5, 1957; *Newsletter from behind the Iron Curtain*, Stockholm, April 1957, p. 23.

[5] Persons who escaped from Estonia to Sweden in August 1957 stated that uranium was already being produced from kukersite in the Sillamäe mine near Narva. For this reason the mine was a totally prohibited area. Although it is difficult to check the accuracy of these statements, it is a fact that the Sillamäe mine has not been mentioned in the Soviet press for the past seven years, even though it is known that it has not been closed down.

[6] A. Aarna, *op. cit.*, pp. 45—6.

where 75% (according to some sources 65%) of all the Soviet Union's oil shale is quarried and 80% of the crude oil and 68% of the gas extracted from shale are produced.[7] Assuming that Slantsy, near the Estonian border, might supply approximately 5—10% of Soviet oil shale, the rest of the country's share cannot be more than 15—20% of total output.

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The Estonian oil shale industry was founded during the period of independence between the two world wars. Almost 10,000 tons of kukersite were quarried in 1918 and by 1924 output had reached 233,594 tons. In 1924, 600 tons of crude oil were produced, and in 1933 the production of gasoline began. In 1939, 1,653,000 tons of kukersite were quarried and 179,000 tons of crude oil and 22,000 tons of gasoline produced. In addition, asphalt and impregnating oil for railroad ties were manufactured.

The first and largest industrial concern was the Kohtla-Järve state-owned joint-stock company. Between 1922 and 1937 other, private enterprises were founded in Kivioli, Kohtla, Türsamäe, and Küttejou. When the Soviets first occupied the country in the fall of 1940, all oil shale industries were expropriated. A year later, some of the mines and factories suffered heavily in the fighting. When the Germans entered in 1941 these industries were not denationalized, but were transferred to the firm Baltische Öl GmbH, which had been established in Berlin. The Germans, using the labor of Soviet prisoners of war, also began to build up a new oil shale industry in Ahtme. However, when the Germans retreated in 1944 considerable damage was again inflicted, especially in Kohtla-Järve, Kohtla, Sillamäe, and Kivioli. Indeed, a couple of years after the German retreat subterranean fires were still ravaging the Kivioli mine.[8]

A decree issued by the Soviet State Defense Committee in 1945 on the development of the Estonian oil shale industry directed that in 1948, 13 million tons of oil shale be quarried, 800 million cubic meters of gas produced for Leningrad, oil output raised considerably, and a new oil-fueled thermal electric power station built. According to the decree, 40,000 miners were to be employed in 1948 and the number of workers in the oil shale industry was to total around 100,000. This plan, however, proved far too ambitious. Even with the labor of German prisoners of war, by 1948 the existing mines had been only partially restored, only one new mine, in Ahtme, was open, and one gas works built, in Kohtla-Järve, with a capacity of 400 million cubic meters a year. In all, considerably less than three million tons of shale was produced, and oil output did not attain the level of 1939. Two years later, in 1950, output was still only three and a half million tons.

The Fourth Five-Year Plan (1946—50) also confirmed the failure of the 1945 plan, as the target fixed for 1950 was only 8,400,00 tons of oil shale. At the same time 40% of the capital investments assigned under the plan to Estonia were for the

[7] D. Kuznetsov, *Materjale Baltimaade rahvamajanduse ajaloost*, Tallinn, 1956, p. 56; *Eesti Kommunist*, Tallinn, No. 7 (1957), p. 30.

[8] *Eesti*, *op. cit.*, pp. 78 and 88—9; A. Aarna, *op. cit.*, pp. 6—9.

oil shale industry. Still, this target could not be reached by the Fifth Five-Year Plan (1951—55). According to an official report published by the Statistical Administration of the Estonian SSR only 7,500,000 tons of oil shale were quarried and 405,300,000 cubic meters of gas produced in 1956, while in the first half of 1957 the figures were 4,000,000 tons and 201,100,000 cubic meters respectively. The 1956 output of crude oil—110,000 tons—was less than the 1939 figure.[9]

Thus, although since 1945 no plan has been fulfilled, the production of oil shale has increased many times over. A number of new mines have begun operating, though far behind schedule. This should bring the total up to thirteen. The new mines are situated in a relatively small area, between Kohtla-Järve, Sompa, Ahtme, Johvi, and Kukruse. Kohtla-Järve has become the center of the entire oil shale industry.

Much has been said by the Soviets about the gas works in Kohtla-Järve, which had been completed in 1948 and is justifiably described as the first of its kind in the world. A second installation of its type has been built at Slantsy. The Kohtla-Järve works is connected to Leningrad by a 200-kilometer underground pipeline and by a 140-kilometer line of lesser capacity to Tallinn. The Tallinn line is at present operating only at 14% capacity, supplying gas to 8,000 apartments at the most, though according to the Fifth Five-Year Plan, by 1955, 54,000 apartments were to have been supplied with gas.[10] This is almost certainly because there is not enough gas left to supply Tallinn's needs after the requirements of Leningrad have been met. According to calculations made in Leningrad in 1953, oil shale gas has replaced 114,000 tons of petroleum, 350,000 cubic meters of firewood, and 80,000 tons of coal, originally brought in from Pechora.[11]

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Losses during the production of kukersite have been rather large, and 40—45% of the mineral remains unused in the mines. After the kukersite has been mined it is sorted into three grades: pieces from 125 to 400 millimeters in diameter, pieces from 25 to 125 millimeters, pieces under 25 millimeters. During recent years more than 35% of the total output has been of the third grade, which cannot be used for industrial purposes, and has therefore been accumulating. During the last three years a small proportion of it—about 666,000 tons a year—has been sent as fuel to Latvia and Leningrad Oblast.[12]

Hence, assuming that the above-mentioned data on oil shale production in 1956 is correct, the 7,500,000 tons are made up as follows:

[9] A. Veimer, *Eesti NSV majandusprobleeme*, Tallinn, 1945, pp. 145 and 156—57; E. Brandt, *Sotsialismi ülesehitamise moningaid iseärasusi Noukogude Eestis*, Tallinn, 1955, p. 34; *Noorus*, Tallinn, No. 7 (1957), p. 8; *Rahva Hääl*, February 24, March 15, and August 14, 1957; *Svensk Tidskrift*, Stockholm, 1953, pp. 516—19; *Baltische Hefte*, Gross-Biewende, Heft 3, 1955, pp. 2—6.

[10] D. Kuznetsov, *op. cit.*, p. 63; *Rahva Hääl*, February 15, 1953 and August 12, 1955; *Radio Tallinn*, January 13, 1957.

[11] D. Kuznetsov, *op. cit.*, p. 63.

[12] V. Tarmisto and M. Rostovtsev, *Eesti NSV*, Tallinn, 1957, p. 94; *Kümme aastat Eesti NSV Teaduste Akadeemiat*, Tallinn, 1956, p. 43; *Rahva Hääl*, October 9, 1957.

Grades 1 and 2 ...	Suitable for industrial purposes as well as fuel.....	4,875,000
Grade 3	Used as fuel	666,000
Grade 3	Left unused	1,959,000
	Total Production.....	7,500,000

Thus, the figure of 7,500,000 tons is misleading; in 1956 only 5,541,000 tons were actually consumed.

A breakdown of the shale consumed in 1956 gives the following picture (in tons):

Used for gas production in Kohtla-Järve[1]	2,000,000
Exported to gas works in Slantsy[2]	912,000
Used for production of crude oil in Kohtla-Järve, Kohtla, and Kivioli[3]	550,000
Total	3,462,000

[1] *Rahva Hääl*, April 11, 1957.
[2] *Ibid.*, April 9, 1957.
[3] On the assumption that oil output is 20% of the weight of the shale and that crude oil production in 1956 was 110 000 tons.

Hence, 2,079,000 tons must have been used to generate electricity and as fuel in Estonia, Latvia, and Leningrad Oblast. No information is available as to how much oil shale is used for generating electrical energy or as fuel for railways and factories. Of late kukersite oil has come to be used to some extent as fuel on Estonian railways, a return to the 1939 situation.

For 10 years attempts have been made, with modest results, to utilize the by-products resulting from the processing of kukersite. In 1949 the small Kukermiit Works in Tallinn began manufacturing from oil shale ash a binding material akin to cement but inferior to the high-quality Estonian Portland cement. In 1955 another small experimental factory in Tallinn began to produce silicate bricks from kukersite ash, but again they are not as good as the ordinary Estonian bricks. In Kohtla-Järve modest quantities of oil shale bitumen have been produced, used, among other things, to cover the Tallinn—Leningrad, Tallinn—Riga, and to some extent the Tallinn—Tartu highways. Little else worth mentioning has so far come out of the attempts at total utilization.[13]

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At the present moment 90—95% of the kukersite comes from underground pits and only 5—10% from the two strip mines in Viivikonna and Kohtla.[14] The 70% increase in oil shale mining envisaged in the Sixth Five-Year Plan was to have come about mainly through strip mining, especially in Viivikonna. There have even been reports that in the future 7.5—8.0 million tons are to be produced by strip mining, and that the capacity of the Viivikonna mine is to be raised to 10 million tons, though this is obviously impossible for some considerable time, since, according to the original plan, only 12 million tons were to have been

[13] *Kümme aastat Eesti NSV Teaduste Akadeemiat*, *op. cit.*, pp. 52, 57, and 61; V. Tarmisto and M. Rostovtsev, *op. cit.*, pp. 199—201.
[14] *Rahva Hääl*, November 27, 1954; *Eesti Kommunist*, No. 9 (1955), p. 8.

produced in the whole of Estonia in 1960. (According to later information 11 million tons, climbing to 25 million tons in 1965.)[15] Much is certainly being done to increase the importance of strip mining, but as yet it is too early to estimate how far the rather extensive plans can be fulfilled.

The Sixth Five-Year Plan originally aimed at a 70% increase in shale gas production, as well as an increase in crude oil production. To this aim a new gas works with an annual capacity of 400 million cubic meters and a new oil refinery are to be built in Ahtme. Another gas pipe line is to be built from Ahtme to Leningrad. According to the plan, 400,000 tons of oil and 415 million cubic meters of gas are to be produced in 1960.[16] However, so far the construction of the oil refinery and gas works has hardly begun, which would indicate that the 1960 date line will not be met. *Eesti Kommunist*, the monthly organ of the Central Committee of the Communist Party of Estonia, also hints that the plan for gas output will not be fulfilled, as it mentioned in its May issue that the 1960 output will be 415 million cubic meters, equal to the present total capacity of the Kohtla-Järve gas works. Total output, after the factory in Ahtme is completed, ought to be more than 800 million cubic meters.

Finally, the Sixth Five-Year Plan provided for an increase of 180% in the production of electric energy, to come primarily from the new Baltic electric power plant, fueled by oil shale, that is to be built in Soldino near Narva. The planned capacity of the plant's first unit is 300,000 kilowatts, its yearly consumption of kukersite five million tons (according to some sources two or nearly three million tons), and its annual output 3.5 billion kilowatt-hours.[17] Building has been going on for some time already, and the high-voltage main lines to Leningrad, to the Leningrad—Moscow railroad (which is to be electrified), and to Riga and Tallinn are under construction. It is not impossible that the plant will be completed by 1960.

Frequent mention has been made of plans to combine the electric power plants of Estonia, Latvia, Lithuania, Leningrad Oblast, and Belorussia into a single power system, whose nucleus would be the Baltic plant now under construction. After the latter has been completed it is claimed that the Estonian SSR will produce 4,000 kilowatt-hours of electric energy per capita,[18] more than any of the other Soviet republics.

Aleksander Kaelas

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[15] *Eesti Kommunist*, No. 5 (1957), p. 4; *Rahva Hääl*, February 26, 1956, and February 18, 1957; *Radio Tallinn*, February 26 and August 19, 1956; August 16, 1957

[16] *Eesti Kommunist*, No. 2 (1956), p. 14; No. 5 (1957), pp. 4—5; *Rahva Hääl*, February 26, 1956; *Radio Tallinn*, October 15, 1953.

[17] *Eesti Kommunist*, No. 2 (1956), p. 13; *Rahva Hääl*, February 26, April 18, and July 26, 1956; *Radio Tallinn*, September 1, 1957.

[18] *Radio Tallinn*, July 3, 1957.

The Soviet Urban Housing Problem

The housing shortage has long been and promises to continue to be one of the most critical problems of the Soviet economy. During the past 30 years the urban population of the Soviet Union has increased 3.2 times, while the accommodation available in cities has almost trebled. In absolute figures, in 1926 the Soviet urban population was 26.3 million and the living space available 216 million square meters; in 1955 the figures were 84.6 million and 640 million square meters respectively.[1] Thus, by 1955 not only had all the damage done to the urban areas during the war been made good but the living space available had increased over the prewar figure.

Incidentally, the Soviet economist Evgeny Varga has taken these figures as the basis for declaring that, although living conditions in the cities are still not satisfactory and that while the situation may not have improved, at least it has not deteriorated during the Soviet period.

There is no end of illustrations of the problem in the Soviet press. For example, after waiting many years for proper accommodation, one Moscow worker received for himself and his family of four one room, 12 square meters in size;[2] a family of seven had ten square meters;[3] one of five had 12;[4] and one of nine had 16.[5] According to *Vechernyaya Moskva* ten or even more families are sometimes found living in one apartment.[6]

The Soviet government, however, has been taking only half-measures to remedy the situation, such as erecting in large cities dwelling houses comprising single-room apartments and having communal kitchens. Next year the government has promised to introduce small, family apartments, a measure which was discussed in a *Vechernyaya Moskva* article entitled "What Should a Small Apartment be Like?"[7] This article revealed that such accommodation would consist of one or two rooms not exceeding 25 square meters in all and designed to house families of four or five persons.

A decree published by the Party Central Committee and Council of Ministers on July 31, 1957 entitled "On the Development of Housing Construction in the USSR" underlines the seriousness of the problem and shows what steps are proposed to alleviate it.[8] "The housing problem still remains one of the most pressing. The population of many cities, workers' settlements, and villages is experiencing a shortage of well-built accommodation. A large number of families are still living in ramshackle houses."[9] The decree then goes on to list some of the

[1] *Narodnoe khozyaistvo SSSR: Statistichesky sbornik* (The National Economy of the USSR: A Statistical Compilation), Moscow, 1956, pp. 27 and 163.

[2] *Trud*, April 2, 1955.

[3] *Izvestia*, August 28, 1957.

[4] *Zarya Vostoka*, Tashkent, February 1, 1957.

[5] *Literaturnaya gazeta*, October 8, 1955.

[6] *Vechernyaya Moskva*, June 3, 1957.

[7] *Ibid.*, May 14 and June 20, 1957.

[8] *Pravda*, August 2, 1957.

[9] *Ibid.*

reasons for the difficulties: failure to make full use of available funds, nonfulfillment of plans, the shortage of building material, and the scattering of material available over too many projects.

When examining the Soviet housing situation it must be remembered that frequently no allowance is made for accommodation lost from causes other than war, even though this sometimes amounts to as much as one third of the new housing put up. Thus, in Tashkent during the Fifth Five-Year Plan (1951—55), although 297,000 square meters were erected, 178,000 square meters were lost,[10] due partly to the demolition of houses built prior to 1917, partly to the demolition of whole blocks for reconstruction purposes, and partly to such poor building that much of the new housing requires major repairs soon after construction. None of this, however, is taken into account. Moreover, when calculating living space official figures include porches, lobbies, staircases, kitchens, and even basements.[11] These two factors alone mean that official figures are considerably inflated.

The new decree revised the housing plans approved at the Twentieth Party Congress, as they had turned out to be inadequate. The original plan envisaged that between 1956 and 1960, 205 million square meters of living space would be made available, a total which the decree has increased by 10 million square meters, or just under 5%. The increase for private housing construction, however, is considerably greater. The Twentieth Party Congress had set a target of 84 million square meters; the new decree boosted this a further 29 million to a total of 113 million square meters, an increase of almost 35%. Hence, in effect, the highly publicized amendment to the original plans is going to depend on private initiative to a significant degree if the goal is to be reached.

However, these are just quantitative plans; the qualitative facts are equally interesting. Some notion as to the quality of Soviet building can be judged from the following extracts from the Soviet press: In 1952 the magazine *Ogonek* announced that Novgorod, which had contained 2,346 buildings before the war but had been completely destroyed during the fighting, now had 1,877 new buildings with a total living area of 157,000 square meters.[12] Two years later, *Izvestia* reported that the houses in the new Novgorod were of poor quality brick and damp timber, and had begun to deteriorate rapidly not long after they had been completed.[13] Ceiling beams embedded into walls while still damp began to rot, floors became uneven and broke up, and walls were cracked. Similar cases were observed in other cities. In Stalinabad, the capital of the Tadzhik SSR, the recently completed Palace of the Republic Party School and the Firdousi Tadzhik State Library had fungus growing on the damp timbers. The problem of fungus is in fact becoming acute in the city.[14]

[10] *Ibid.*, August 4, 1957.

[11] *Narodnoe khozyaistvo SSSR, op. cit.*, pp. 162—3.

[12] *Ogonek*, No. 11 (1952).

[13] *Izvestia*, April 20, 1954.

[14] *Kommunist Tadzhikistana*, Tashkent, August 11, 1956.

This year, *Krokodil*, the satirical magazine which in many ways gives an accurate reflection of Soviet life, published nine cartoons and five articles on decrepit housing in three issues alone (24, 25, and 26). Then again, on April 7, 1956 *Izvestia* reported that at the beginning of the year a check on the quality of new housing had been made in 20 Soviet cities. Of the 1,700 new buildings examined, only 15 were passed without some sort of comment. It can therefore scarcely be argued that the faulty construction is limited to a few, isolated cases.

A factor contributing to the shortage is the persistent failure to meet planned targets. For example, in Minsk the 1956 housing plan called for the construction of 144,000 square meters, but only 84,000 were actually built, and even the apartments which were completed were not connected with the water mains or the sewage disposal system even though the latter were laid in 1955.[15] In Ashkhabad, the capital of the Turkmen SSR, by August 1, 1956 only 10% of the new housing planned for the year had been built.[16] On August 17, 1956 *Sovetskaya Rossiya* reported that only 18 of the country's 86 republics, oblasts, and krais had kept up with their housing construction schedule.

The reason for this is not particularly obscure: the government has always stressed the industrialization program, and housing has been pushed well to the rear. The history of Soviet housing clearly shows this. In 1917—18 all private homes were nationalized, passing by and large into the possession of the tenants, who were organized for the purpose into "housing communes." Later, these communes were reorganized as housing groups, which were not engaged in actual construction, but were responsible for the upkeep of the houses entrusted to them. In 1937, a decree was issued denying these housing societies credit, thereby in effect closing them down.[17] Once again, the state became the actual owner of almost all living accommodations, the only exceptions being small, private houses built before August 10, 1922, providing they were "not in excess of the owners' requirements." In most cases the houses concerned were so dilapidated that it would not have been worth while nationalizing them. Indeed, in the years preceding World War II many owners renounced their legal rights of ownership, simply because they could not afford the necessary repairs. Private urban housing construction almost ceased, and state building did not keep up with the growth of the population. The existing rights to build privately were seldom made use of since building materials were virtually impossible to obtain.

After the war a decree issued on August 26, 1948 extended the rights of private individuals, enabling them to build, on plots of land rented from the state, houses not exceeding five rooms (regardless of the number of families living in them) or 30—40 square meters. The plots were not to exceed 600 square meters in cities or 1,200 square meters in workers' settlements, resorts, or rural settlements. Loans were provided by the state in accordance with the regulations laid down by the head of the Communal Bank of the Lithuanian SSR. The amounts were 7,000 rubles

[15] *Izvestia*, January 3, 1957.

[16] *Ibid.*, August 4, 1956.

[17] *Pravda*, December 17, 1956; *Yuridichesky slovar* (A Juridical Dictionary), Moscow, 1956, I, 313.

for workers and salaried employees and 10,000 rubles for doctors and teachers. The loan had to be sanctioned by the administration of the enterprises or establishments where the borrower was employed, and had to be repaid within seven years. Interest was at a rate of 2% per annum.[18]

This situation has prevailed up to the present, although now the granting of a plot of land for building purposes and permission to build is a long and complicated business. The borrower, after receiving the sanction of his place of employment, also has to submit a plan of the house, details of construction, a residence permit, and a detailed autobiography. This information is then, as prescribed by law, examined by 15 different departments.[19] However, the builder's real problems do not begin until he has received all the necessary permits. There is no free market for building materials in the Soviet Union and the supplies put aside by the government for private construction are very meager indeed. Admittedly, the cooperative industry is required to supply private builders with 20% of the material it receives, but since this industry is engaged mainly in the production of other types of goods, the 20% is negligible. This measure is applied more for the sake of appearance than for its practical value.

Hence, the builder has to find for himself everything he needs: timber, roofing material, bricks, and so on. A favorite substitute for ordinary bricks is sawdust bound with cement, slag, clay mixed with finely chopped straw, or even plaster of Paris.[20] Labor is another problem, since there are no private contractors and, officially, no unemployment. The way out usually is to make use of wildcat building teams comprising persons who have somehow managed to escape work on state enterprises. Dudintsev describes such a team in his novel *Not by Bread Alone*. They usually work quickly and well, but demand more than the official rates of pay.

The recent decree makes no mention of how much of the total postwar housing budget is accounted for by private building. Only general figures for the amount of housing built or repaired since the war are given. However, the magazine *Finansy SSSR* reported that since the war private housing construction in cities and workers' settlements comprised 69.2 million square meters.[21] The state, however, with its incomparably greater resources, during the same period built only 177.8 million square meters.

The large-scale building by the population envisaged in the decree is quite new. One and a half years ago an attempt was made to direct private initiative into a "socialist groove." The government exhorted factory workers to follow the example of several enterprises in Gorky and start building large housing projects during evenings and on holidays. Accommodation would then be allocated in proportion to the amount of work put in by each family on the project. At the same time the enterprise directors transferred a few workers to the project during the day, but they were paid not by the factory but by the workers for whom the

[18] *Sovetskaya Litva*, Vilnyus, September 8, 1957.
[19] *Krokodil*, No. 2 (1957).
[20] *Sovetskaya Rossiya*, January 13, 1957.
[21] *Finansy SSSR*, No. 3 (1957).

houses were being built. The future tenants then had to overfulfill their production quotas to make up for the loss to the factory of the transferred workers' labor. The finished apartments, although legally the property of the factory, were regarded by the workers as "theirs," since they had built them.

Of late, however, the Soviet press has been putting rather less emphasis on private construction, which would seem to indicate that even this method has lost some of its effectiveness. In any case, to obtain a supply of material continues to be an almost insoluble problem, since no special reserves of money or material are put aside for this purpose. The decree itself was very vague on the subject of financing these projects:

> Housing construction done directly with the . . . participation of workers and salaried employees of enterprises and organizations can be [financed] both from appropriations for housing construction in capital investment plans, and from other sources employed in the normal run of things by enterprises and managerial organizations for capital construction over and above the state plans. . . . [These] include funds from enterprise reserves, the director's fund, the consumer goods fund, prizes for results of the all-union socialist competition, and other prizes presented by enterprises and organizations.

In sum, in spite of the decree's asseverations of the achievements in housing construction and the promises for the future there is every indication of a continued crisis, brought about by the shortage of materials and an unsatisfactory rate of development. It is doubtful that the decree will bring about a great improvement on the directives of the Twentieth Party Congress.

Voldemar Berg

REVIEWS

Kommunist

Organ of the Central Committee of the Communist Party of the Soviet Union.
Published by PRAVDA. Nos. 14 and 15, 1957.

No. 14 of the Party organ *Kommunist* appeared in the second half of October, just on the eve of the fortieth anniversary of the October Revolution, and the content reflects the approaching anniversary and celebrations. No new questions are advanced or vital problems broached, possibly because when the number appeared there were no threatening signs on the horizon. The lead article, "At the Head of the Masses—Along the October Path," contains the usual Party propaganda on Soviet achievements. An assertion which has recently figured in the Soviet press and been served up as a grandiose achievement of the USSR immediately catches the eye: "the passing of socialism beyond the framework of one country and its transformation into a world socialist system."

The second main point is the claim that the Party and people are united. This contention has, of course, been repeated by the Party leaders over the last forty years, but never so insistently as at present. Never have the "Party" and the "people" been linked in such a triumphant and self-assured manner: "The Party's policy for the masses is identified with their own thoughts, with their strivings for a happy life, it is a complete and profound expression of what the people feel. Soviet people say about the Party's policy, the Party line: 'our policy,' 'our line.'"

Naturally, in developing this thought the editors spare no words in their description of the achievements of the Soviet Union, which are suggested as the reason why the people worship the Party. This issue appeared shortly after the announcement that the Soviets had successfully tested a long-range missile and launched Sputnik I. The propaganda effect of these events is clear.

> It is enough to remember that it was in the USSR that the first atomic power station and the most powerful proton-synchroton in the world were built, that Soviet science and technique created the first intercontinental ballistic missiles in the world and the means of ensuring their launching, [and] created the first artificial satellite in the world. These facts alone prove how great the advantages of socialism over capitalism are.

The Khrushchev slogan that the Soviet Union will soon overtake the United States in the production of the most important foodstuffs is repeated against the background of these achievements, which, of course, are part of the reason the Soviet living standard is so low.

The inner-Party struggle which took place in June 1957 is linked with this question. Khrushchev's opponents are presented as skeptics, as people who did not value the country's possibilities.

> There were, as is known, skeptics—the Malenkov, Kaganovich, Molotov anti-Party group—who doubted the correctness of the Party course for the practical solution of the task "to catch up and overtake," particularly in the field of livestock raising. In this they revealed a misunderstanding of the needs of the economic development of Soviet society, in essence, a disbelief in the strength and possibilities of the Soviet people and its collective leader—the Communist Party.

The article is a panegyric on the Communist Party, the cult of which has replaced the former cult of Stalin. It ends with a stern warning to all would-be revisionists.

G. Glezerman's "The General and Particular in Historical Development" has the task of presenting the forty years of the Soviet regime as a "magnificent path traversed by the peoples of the Soviet Union." Using almost the whole arsenal of Marxist theory the author attempts to prove that Marxism-Leninism alone is an infallible theory and flawless philosophy, while all other philosophies are erroneous. He strongly criticizes Arnold Toynbee, who replaced the concept "formation" with the concept "civilization," and the supporters of "microsociology," which considers society not an integral organism, but the sum of a multitude of various social phenomena. This is done in order to prove the existence of laws governing the transition to socialism. But, analyzing the regularity of socialist development he speaks of the need to combine the experience of socialism gained by the satellites, because the "experience of socialism by individual countries cannot be foisted on other countries." The article ends with the usual attack on revisionists, in this case, national Communists, in spite of the restoration of friendly relations with Tito.

P. Pershin's "October and the Solution of the Agrarian Question in the USSR" is a specially prepared historical review of agrarian reform in the USSR. Asserting that no other political party could have solved the land question, the author states that only the October Revolution satisfied the age-old dream of the peasants. Collectivization is presented as a revolutionary phenomenon which arose through the initiative of the Communist Party and embraced the whole of the peasantry. Throughout the section on collectivization Stalin is not mentioned even once; everything was supposedly done by the Party, supported by the people. There is deliberately little mention of the sovkhozes, mainly because they have recently been increasing in number at the expense of the kolkhozes.

N. Ter-Akopyan's "Marxism and the Lessons of the Revolutionary Movements of 1848—49" has been published to coincide with the publication of the eighth volume of the new edition of works of Marx and Engels. The latter gives a summary of the experience gained by the popular movements in Germany, France, Italy, Poland, Hungary at the time. The article makes no attempt to outline the events of the period; the main thought throughout is that the revolutionary movement failed because of the treachery of the petty bourgeoisie and the opportunist tendencies of the leaders of the revolution.

An article by Secretary of the Yakutsk Oblast Committee of the Communist Party B. Mityushkin, "Three Hundred and Twenty Five Years of a Great Fraternal

Friendship," is given over to the union of Russia and Yakutia. Much emphasis is laid on the benefits to be gained from the union of the people of the region with a large and cultured state. This is a reminder, particularly to the satellites, of the advantages to be gained from entering the Soviet orbit:

> The example of the workers of Yakutia shows that independent historical creation is not the property of "chosen" nations alone, but accessible to all peoples, independent of color, national and racial distinctions. The October Revolution led the Yakut people out onto a new path and long ago turned a remote region of Tsarist Russia into a Soviet republic with equal rights, confidently, together with all the peoples of Russia, proceeding towards Communism.

Since the establishment of the Soviet system, statistics have generally been cleverly presented to show any branch or object in as favorable a light as possible. The changes in the post-Stalin period designed to present the Soviet system as a structure resting on firm, generally accepted principles made it necessary to adjust the mechanism of the Statistical Administration. V. Starovsky's "New Tasks of Soviet Statistics" explains the reorganization as follows:

> In connection with the reorganization of the administration of industry and construction new important tasks have been assigned Soviet statistics. The successful achievement of these tasks demands the further consolidation of a single centralized system of accounting and statistics in the country's economy.

Although little reference is made to them the real faults of the Statistical Administration are evident: "Parallel accounts used to be sent to the financial and banking organs, and to a number of local organizations, and often . . . an illegal [system of] accounting not approved in official regulations came into being." From now on statistics are to be centralized, and local organs are to reduce, simplify, and unify the accounting done by them. The author goes on to state that "the comparison of our economic indices with the indices of foreign countries is of great significance. To date such comparisons have been carried out, as a rule, with all-union figures." The wish to have figures for the individual republics seems to indicate that all-union statistics are frequently unsatisfactory, and, indeed, many recent reports in the Soviet press have compared production in a very small area (sometimes as small as an individual collective farm) with the production of an entire foreign country. This has been particularly true in accounts of successes in the current Soviet campaign to overtake and surpass the United States in certain areas of agricultural production. The method is hardly legitimate.

Of the remaining materials in this number, two are of interest. The author of the article entitled "The Strengthening of Peace and the Development of International Cooperation," V. Cheprakov, participated in a session of the UN Economic and Social Organization held in July and August in Geneva. The title seems to imply an article on the need for and possibility of coexistence. However, it is almost entirely given over to the shortcomings and crises in the non-Communist countries: constant inflation, the drop in purchasing power, the falling off of the growth of industrial production in the West, undernourishment, poor medical

services in capitalist countries, large numbers of people suffering from mental disorders, the fact that almost half the children of school age in the world do not attend school, deteriorating living conditions, the ruining of the poor peasants, and the mass exodus from rural regions. Poverty and misery are the features of the capitalist world.

The review of *The Correspondence of the Chairman of the Council of Ministers of the USSR with the President of the USA and the Prime Minister of Great Britain During World War II (1941—45)* says little about the documents contained in the work; the main thought is that the aggressive attitude of the Soviet Union's former allies towards the USSR existed even before the war. The theme is that the ruling circles of the West are pursuing the cold war against the peaceful policy of the Soviet Union and against the interests of their own peoples.

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Issue No. 15 is the special anniversary number, and differs in appearance, content, size, and even style from the normal run. Half as long again as the regular edition, its content reflects the celebrations of the fortieth anniversary of the October Revolution. To mark the occasion attempts are made to avoid the usual, hackneyed Party clichés, and the style is more "elevated" than usual, with pretensions to literary qualities. The lead article is entitled "In the Name of Man." The implication is clear: everything that has been done in the Soviet era has been done not just in the name of socialism or for the triumph of Marxist ideas, but for the sake of mankind in general. However, this note is soon dropped, and on the very same page comes the transition to more immediate themes. "The struggle against capitalism embraces all fields of social life: economic, political, ideological, and cultural." This brusque switch from the acclamation of humanism to the call to battle is typical of the system. Man as such is not important: the whole historical significance of the Revolution is reduced to the competition of two rival systems.

This leads to strong attacks on the capitalist world:

> Let us take the last 40 years. What has capitalism given the masses during these years? Sharply increased exploitation and such intensive labor as to exhaust, crush, and literally stupify the workers. Several major economic crises, which have increased the miseries and sufferings of the masses tenfold, have led tens of millions of people to extreme poverty and ruin, to wildness and despair...

Then follows a bitter denunciation of the non-Communist world and a hymn of praise to the Communist Party.

Turning to the abolition of private property the article asserts that "the abolition of private ownership of the means of production, the liquidation of competition is a great humanitarian act, an important act in the emancipation of the individual." Private property was alleged to engender animal-like moral relationships among people, with the devil take the hindermost. No mention is made, of course, of the careerism, the self-seeking, petty private interests, or the

struggle not only in every sector of Soviet life, but within the Kremlin itself, or of the millions who have perished in the Soviet Union and the sacrifices made at the behest of the Soviet leaders.

The next thesis is the assertion that in the Soviet Union there are no class distinctions and hence neither oppressors nor oppressed. However, the facts of Soviet life speak for themselves: the equality granted in the constitution is a fiction. So much has recently been said about the elite of the "new class" and the privileged strata that such a pompous statement as "ordinary Soviet people—workers . . ., kolkhozniks, the intelligentsia—constantly think of how to make the Motherland richer and more powerful, and the life of the workers more prosperous, cultured, and happier" is ridiculous. However, it leads the author to his final theme—the growth of the revolutionary spirit among the Soviet peoples.

A second editorial, "The World-wide, Historical Significance of the October Revolution," repeats what has been said about the competition of the two systems, a competition which is described as determining the nature of present-day social relations. These relations take the form of a fierce conflict between socialism and capitalism in which the whole world is participating. The Soviet experiment, it is alleged, has been so successful that most people not only admire it, but are ready to build socialism in their own countries. Hence the socialist camp is constantly growing, while capitalism is becoming weaker every day.

Kommunist then gives suggestions as to how to go about building up a socialist state. First, "it is essential to establish a dictatorship of the proletariat, destroy the old, bourgeois state apparatus, and create a new, socialist one." A further prerequisite of a transition from capitalism to socialism is the destruction of "capitalist production relations," followed by the creation of a material basis for heavy industry on the Soviet model. The main thesis is that "socialist construction can be successful only if a Marxist party, which does not and cannot share the leadership with anyone, stands at the head of the working class . . ."

Although the Soviet leaders have recently expressed their reluctance to engage in the cold war, numerous attacks are made on the non-Communist world, particularly the United States. Much space is now given over to alleged crises in America. But since Khrushchev has set the task of overtaking US per capita meat, milk, and butter production, thereby indirectly admitting American superiority in these fields, *Kommunist* has been obliged to mention the difficulties which the USSR is experiencing, difficulties described, however, as the result of a constant economic growth. The editorial then deduces that socialism ensures a rapid economic development, to which the non-Communist world cannot aspire.

The final section of the article discusses co-existence. The line of thought is very interesting: capitalism is heading towards inevitable destruction, but the Soviet people will not call for it to be destroyed by force of arms, since it is firmly convinced that capitalism will perish from contradictions inherent in it and from the blows of its own people, who, seeing the Soviet Union's rapid progress, will themselves come to the conclusion that the future belongs to Communism.

In view of the anniversary celebrations statements by several heads of foreign Communist parties have been included in this issue. Needless to say, they all extol the greatness and significance of the October Revolution. Secretary of the French Communist Party Maurice Thorez's "The Vital Strength of the Ideas of October" describes the great influence of Lenin's ideas on the French proletariat. Linked with Lenin in fact (although not mentioned by name) is Khrushchev—obvious from Thorez's statements on the present successes of Party construction. It is noticeable that although Thorez speaks of the Soviet Communist Party he does not have in mind the Party organization as a whole. However, he ends by stating that the French Communists have always been guided both in theory and practice by the example of the Soviet Communist Party.

Next comes the representative of the Chinese Communist Party, the title of whose article "The Chinese Revolution—The Continuation of the Cause of the Great October Revolution" speaks for itself. All the measures and actions of the Soviet Communist Party are presented as the best model for the young Communist China. The only reference to an independent Chinese path is, as it were, incidental: "The democratic dictatorship of the people presently in existence in our country is one of the forms of the dictatorship of the proletariat and fundamentally close to the Soviet model. It has, of course, its own peculiarities."

William Foster, the representative of the American Communist Party, links the October Revolution with the workers' movement in America in his article "The October Revolution and the Working Class of the USA." He writes that the Russian Revolution had "a very great influence on the United States of America and evoked much sympathy from the workers there." Foster broaches most of the points found in Soviet anti-American propaganda and his evaluation of events and situations is made in accordance with the directives of the Soviet Party Central Committee. For example, the Allied intervention in Russia in 1918 failed, it is claimed, because the "American soldiers did not want to fight against the Red Army." He repeats the Soviet view that "the blockade against the Soviet people" brought untold suffering, particularly during the famine in the Volga regions in 1920—21. No mention is made of the work of the American relief organization ARA. The US government is reproached for its refusal to recognize the Soviet Union until 1933, and Foster asserts that during World War II the USSR received only $10 billion in aid from the United States, less than was granted to Britain.

Writing of the mistakes made by and the present crisis in the US Communist Party, Foster blindly follows Khrushchev. He links these troubles with the sectarian mistakes of the Party leaders and with the denunciation of the cult of the individual, which led to attempts at revisionism.

The foreign Communist leaders are followed by a representative of the Soviet leadership, Frol Kozlov, with his article "The Working Class and the Revolutionary Traditions of October." He pays special tribute to Leningrad, arguing that the birth of the Bolshevik Party and Lenin's activities are linked with this city,

hence the Leningrad proletariat is the custodian of the revolutionary traditions, on which history is being created and which play a major role in the education of the masses.

The remaining articles present little new or of particular interest. P. Fedoseev's "Social Progress on the Basis of Socialism" serves two propaganda aims: first, to prove the bankruptcy of Western philosophy and the importance of Marxist dialectics, and second, to substantiate the widely propagated theory of the unity of the Party and people. L. Leontev's "Socialism in Economic Competition with Capitalism" develops the lead article's main thesis. Many figures are quoted to illustrate changes, mainly in the satellite countries and China. B. Gafurov's "The October Revolution and the National Liberation Movements in the East" represents these movements as a result of the Communist revolution. A. Surkov's "Together with the People" develops the Khrushchev line that a writer wishing to serve the people must obey the Party's instructions. F. Panferov's "Thoughts" attempts to show that the recent achievements of Soviet scientists and inventors are the result of the Soviet system and the encouragement of the Party.

A. Gaev

The Soviet Secret Police

Edited by Simon Wolin and Robert M. Slusser

Published for the Research Program on the USSR by *Frederick A. Praeger*, New York, 1957, 408 pp.

In the Soviet Union the falsification or "rewriting" of history is a common phenomenon. Well-known facts are frequently passed over in silence or deliberately distorted to make everything confirm with the current Party line. This is particularly true of the history of the origin, development, and activities of the organs of state security, which has been suppressed from the very outset of the Revolution. At the same time, regardless of the numerous names by which they have been known—from the original Cheka through to the present MGB—these organs of terror have remained the chief weapon of the Communist Party's dictatorship.

The Soviet Secret Police, whose publication by the Research Program on the USSR almost coincided with the fortieth anniversary of the establishment of the Soviet regime, is the latest contribution to the literature on the subject and contains much information hitherto unknown. The chapters devoted to the postwar activities of the Soviet state security organs in the USSR, the East European satellites, and the West are of special interest, particularly in connection with the efforts of the so-called Committee for the Return to the Motherland, run by General Mikhailov from East Berlin, to lure émigrés from the Soviet Union back to their native land.

The first section of the book, which is divided into two parts, is written by the editors. It gives a historical account of the secret police and its activities from the moment of incipience in 1917. It may justifiably be termed a short course of the history, if not of the Communist Party, at least of its chief means of terror. The section is very well documented.

A noteworthy feature of the work of the Cheka and its agents (and one which is still valid even today) is expressed in a statement by Martin Latsis, one of the leaders of the organization in the early period. Latsis stated:

> . . . work in the Cheka, conducted in an atmosphere of physical coercion, attracts corrupt and outright criminal elements which, profiting from their position as Cheka agents, blackmail and extort, filling their own pockets. . . . However honest a man is, however crystal-clear his heart, work in the Cheka, which is carried on with almost unlimited rights and under conditions greatly affecting the nervous system, begins to tell. Few escape the effect of the conditions under which they work (p. 6).

A comparison of this statement with the testimony of leading MGB officials who have come over to the West—the Petrovs and Burlutsky, for example—clearly illustrates that all the features mentioned by Latsis are still found in the workers of the state security system today. As the authors justifiably point out, the only changes have been in replacements of personnel and improvements in the level of technical training and education on the one hand and a growth of the actual apparatus, now supplied with all types of equipment, ranging from tanks and airplanes to the most complex chemical laboratories, on the other.

The second, major section of the book comprises nine articles written by former Soviet citizens and illustrating various aspects of the Soviet secret police's activities. It begins with an article by Konstantin Shteppa entitled "Feliks Dzerzhinski: Creator of the Cheka and Founder of 'Chekism.'" It is a biographical outline, and gives an astute psychological portrait of this professional revolutionary.

> Dzerzhinski's psychological development, bearing in mind the circumstances of his childhood and the features of his character, was different from that of Lenin or Stalin. It was colored by his penchant for the romantic and for sentiment, which is so marked in his prison diary [during the Tsarist era]—sentiment in which his self-pity was stronger than his pity for others and in which there were always undertones of cruelty. His emotional fanaticism made him no less impervious to the sufferings of others than Lenin with his doctrinal fanaticism or Stalin with his cold, indomitable purposefulness. . . . Thus the prerequisites of Chekism were present in Dzerzhinski before he became a professional Chekist. This brings us to the question of the prerequisites of Chekism in Bolshevism itself (p. 73).

Perhaps one shortcoming of this article is that biographies of other leaders of the secret police—Yagoda, Yezhov, and Beria—are not given.

In his article "Structure and Functions of the Soviet Secret Police," E. A. Andreevich shows that while the Party apparatus strives to instill pro-Soviet ideas and sentiments in the minds of the masses the police apparatus attempts to uncover any anti-Soviet moods among them. These two apparatuses supplement and support one another to such an extent that there can be no question of which of them is more important for the Communist dictatorship: It could not exist without either. This assertion, supported by numerous facts, is of considerable importance now in view of the frequent mention by the Western press of an alleged

curtailment of the authority of the organs of state security and the acceptance of a temporary relaxation of terrorist methods as an indication of the "evolution" of Soviet power.

Andreevich makes the interesting point that the Main Economic Administration, one of the many and varied sections of the state security network, keeps an eye on the workers of enterprises and on the real state of the economy (as opposed to the "show" figures given for plan fulfillment).

The author is inclined to ascribe the existence of forced labor camps to purely political considerations, arguing that they do not justify themselves economically. This, however, is very much open to doubt since many other researchers on the subject consider these camps an important factor in the Soviet economy, a reservoir of short-term but nevertheless copious and extremely cheap labor, particularly economical in the development of remote and desolate places for which even in the Soviet Union it would be difficult and expensive to recruit free labor.

V. P. Artemiev's and G. S. Burlutsky's "Structure and Condition of the Soviet Organs of State Security After World War II" deals in considerable detail with the everyday conditions of the men of the state security forces. Much attention is given to the question of supplies, especially for the extremely important border troops. The food distributed to these men is of a high quality and, although somewhat monotonous, on the whole better than in the regular army or in the other branches of the MVD's forces. From April through October border troops receive 800 grams of bread a day, the rest of the year 900 grams. They also get 820 grams of vegetables, 30 grams of sugar and 30 grams each of fats, fish, meat, groats, and flour (p. 299). Although the ration is supplemented by hunting, fishing, hog-raising, and so on, by Western standards it would still be insufficient. Burlutsky, who supplied this information, served with the Soviet border troops for many years, and under his command repressive measures were carried out in the Northern Caucasus. He fled to the West in 1953 after the fall of Beria. One interesting feature is the enormous differential in the rates of pay for the MVD forces. A private receives 30 rubles a month during his first year; high-ranking officers can, with the extra allowances paid for length of service, duty in remote areas, and so on, receive up to 6,000 rubles a month.

One feature of the chapters dealing with the activities of the Soviet state security organs since World War II is a list of the accusations made against the civil population of areas occupied during the war by the enemy. Perhaps even more important from the Western reader's point of view, however, is a point brought out by E. A. Andreevich in the chapter "Structure and Functions of the Soviet Secret Police." The author refutes the widely held belief that the really dangerous Soviet spies are always disguised and highly qualified for the job. He writes:

> Operating on an unprecedented scale and using ideological baits INU [The Foreign Administration of the MVD] has developed new techniques in the old art of espionage . . .

> [It has] developed a method for obtaining highly secret information through spies who sincerely believe themselves not to be spies. Around a person whom it intends to use in this way, INU carefully organizes a milieu of "former" Communists, fellow-travelers, light-minded persons, blabbers, drunks, or even, if necessary, homosexuals. On some pretext or other an INU agent keeps contact with the group and obtains the desired information (p. 142).

The chapter entitled "Postwar Activities of the Soviet Organs of State Security in Western Europe" reveals that Western Europe has been inundated with a mass of petty agents recruited with ease and at very little cost. The "information" they divulge, for the most part of little consequence, sometimes contains grains of considerable value. The real service they perform for the Soviet government, however, is that they distract the attention of the Western intelligence and counterespionage organs, which because of them sometimes completely miscalculate the work of the Soviet spy system in general.

Clearly, the details given by the authors of this section cannot be new to the Western experts. The book, however, is not designed for experts, but for the average reader who may one day fall a victim to the Soviets, either through ignorance or trust. The authors are not out to frighten the reader or make him suspicious of those around, but they realize that the enemy can be combated effectively only if he is known and understood, and not by groping about in the dark. Once this is appreciated the danger of error and temptation is greatly reduced. One of the best means of dispersing the clouds of Soviet propaganda is an unimpassioned and accurate description of Communism in all its manifestations. In this respect *The Soviet Secret Police* is of considerable value.

I. Saburova

Publications of the Institute for the Study of the USSR:

BELORUSSIAN REVIEW, No. 4, 1957, 176 pp. (In English).

Issue No. 4 contains the following articles: "Jakub Kolas," by S. Stankievic; "UZVYSSA—The Belorussian Literary Club," by A. Adamovic; "The Soviet Falsification of Belorussian History," by Jan Stankievic; "The Twentieth Party Congress and the National Question," by P. Urban; "Belorussian Agriculture and the 6th Five Year Plan," by S. Kabys; "Hydraulic Engineering Works in Belorussia," by A. Lebiedz; "The Location of Industries in the Belorussian SSR," by U. Halubnicy; "Labor Transfers of Youth in the Soviet Union," by T. Davletshin.

There are also reviews and a chronicle of recent events in the Belorussian SSR.

CAUCASIAN REVIEW, No. 4, 1957, 160 pp. (In English).

Issue No. 4 contains the following articles: "The Restoration of National Autonomy in the Northern Caucasus," by R. Traho; "Soviet Policy in the Armenian Question," by S. Torossian; "Soviet Nationality Policy in Azerbaidzhan," by Mirza Bala; "Azerbaidzhan and the Sixth Five-Year Plan," by S. Tekiner; "The Sixth Five-Year Plan in Soviet Armenia," by H. Khachatrian; "The Sixth Five-Year Plan in Georgia," by V. Inskirveli; "The Twentieth Congress of the Communist Party and the Nationality Problem in the USSR," by H. Koch; "Education at the Twentieth Congress of the Soviet Communist Party," by R. Karcha; "The Campaign Against the Clergy in Azerbaidzhan," by Dj. Hadjibeyli; "Slavic History in the Eyes of the Soviets," by A. Aesson;

"Equality of the Sexes in the USSR," by T. Aydamyrkan; "Literature on Dagestan and Its People," by R. Adighe.

The reviews section contains the following: *Haykakan SSR Gitutyunneri Akademiayi Tegekagir, Hasarakakan, Gitutyunner*, No. 4, 1956, by L. Mikirtitchian; *Ocherki po istorii filosofii i obshchestvenno-politicheskoy mysli SSSR*, by L. Massissian; *Armenian Review*, Nos. 34 and 35, 1956, by L. Aramian; R. Traho's *Cherkesy*, by M. Lashauri; *Gruzinskaya SSR—Ekonomiko-geograficheskaya kharakteristika*, by K. Georgia; *Spravochnik agitatora na 1957 g.*, by B. Baytugan; *Sovetskaya Kuban* for January 29, 1957, by B. Barasbi; *Iskusstvo Azerbaidzhana*, by J. Souz; *La Nef*, March 1956, by Dj. Hadjibeyli; Minas Tololian's *Dar my Grakanutyun 1850—1950*, by L. Armenian.

There is also a "Chronicle of Events."

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DERGI, No. 10, 1957, 112 pp. (In Turkish).

This issue contains the following articles: "National Communism in the Soviet Union and the Red Turan Myth," by Mirza Bala; "The Fortieth Anniversary of the National Rights of the Soviet People," by Reinhart Maurach; "The Basic Line of Soviet Foreign Policy in Recent Years," by David Y. Dallin; "Marxist Ideology and Soviet Reality," by Frederick C. Barghoorn; "The Development of Communism in Iran," by Ali Azertekin; "The Sixth Session of the Supreme Soviet of the USSR and the Question of Greater Rights for Union Republics," by A. Yurchenko; "The State Budget for 1957," by P. Kovankovski; "The Russification of the Tadzhik Literary Language," by A. Benningsen.

There is also a report of the Institute's Ninth Conference in Munich, reviews, and a "Chronicle of Events."

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UKRAINIAN REVIEW, No. 4, 1957, 166 pp. (In English).

Issue No. 4 contains the following articles: "The Present State of the Ukrainian Ferrous Metal Industry," by V. Holubnychy; "Social Insurance and Social Security in the Ukraine," by V. Plyushch; "The Kakhovka Hydroelectric Project and the Greater Dnieper Scheme," by S. Protsyuk; "Fresh Light on the Nationality Policy of the Communist Party and the Soviet Government," by D. Solovey; "Collectivization in the Kirghiz SSR," by A. Kravchenko; "Soviet Foreign Policy in the Light of Resolutions of the Twentieth Party Congress," by R. Yakemchuk; "Questions of Governmental Organization and Administration at the Twentieth Party Congress," by A. Yurchenko.

This issue also contains a list of all Ukrainian publications of the Institute.

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NINTH CONFERENCE of the Institute for the Study of the USSR: "Forty Years of the Soviet Regime." Munich, 1957, 164 pp. (In English).

This is a complete record of the Ninth Institute Conference held in Munich on July 26 and 27, 1957. For a summary see *Bulletin*, No. 9, 1957.

CHRONICLE OF EVENTS

(As reported by the Soviet Press and Radio)

October 1957

1 Squadron of Soviet warships leaves Syrian port of Latakia for home.

2 Speech by Soviet representative to the UN Disarmament Commission A. A. Sobolev published.

Soviet-Pakistan trade talks begin in Moscow.

3 Report published that Molotov and Molotov Oblast have been renamed Perm and Perm Oblast respectively.

Report published on Munich Congress of Orientalists.

4 Zhukov leaves Moscow for Yugoslavia.

Egyptian Minister of Communications Mustafa Khalil arrives in Moscow.

5 TASS report published on the launching of the first artificial satellite.

Soviet scientific expedition headed by Member of the Academy of Sciences of the USSR V. G. Fesenkov arrives in Egypt.

6 Delegation of Soviet builders headed by Chairman of the State Committee for Building Affairs V. A. Kucherenko arrives in Stockholm.

Report published of arrival in Moscow of delegation of Belgian statesmen.

Report published by the Ministry of Foreign Affairs on Japanese proposals for the cessation of atomic and nuclear weapon tests in the USSR.

Statement by Soviet delegation at the twelfth session of the UN General Assembly on the subject of peaceful coexistence published.

7 Khrushchev gives interview to chief diplomatic correspondent of *The New York Times* James Reston.

8 Soviet-Czech communiqué on the conclusion of a consular convention and convention on dual nationality published.

Report published of opening of second section of a synthetic rubber factory in Sumgait, Azerbaidzhan SSR.

Report published of testing of new hydrogen shell.

Khrushchev receives two British MP's.

9 Report published by the Central Statistical Administration on the preschedule fulfillment of state deliveries and purchases of milk.

Report published of death of corresponding member of the Academy of Sciences, E. E. Bertels.

10 Mikoyan receives Mustafa Khalil.

Group of Saudi Arabian agricultural specialists arrives in Moscow.

11 Reception held in the Party Central Committee for Japanese Socialist Party delegation.

Ceylonese parliamentary delegation leaves Moscow for home.

Soviet-East German consular agreement comes into force.

Mustafa Khalil leaves Moscow for Berlin.

Report published of death of former Deputy Minister of the Defense Industry I. A. Barsukov.

Results published of Franco-Soviet talks on cultural and scientific relations.

Report published of discovery of a large iron ore deposit on Mt. Aramazd, Armenian SSR.

Khrushchev's replies to *The New York Times* correspondent Reston's questions published.

First plenary session of the organizing committee of the Union of Artists of the RSFSR held in Moscow.

12 Japanese Socialist Party delegation leaves Moscow for Warsaw.

Report published of stay in Moscow of head of the American Institute for International Education Kenneth Holland.

Gromyko's speech at the UN Political and Security Committee on the need for concrete disarmament measures published.

Soviet-Austrian agreement on technical and commercial questions of Danube shipping ratified.

13 Delegation of Lebanese statesmen arrives in Moscow.

Report published of death of First Deputy Chairman of the Council of Ministers of the RSFSR A. M. Safronov.

Japanese Socialist Party delegation's statement on its stay in the USSR published.

Report published by the Foreign Ministry declaring Danish embassy attaché Ranek to be *persona non grata*.

Party Central Committee's appeals on the fortieth anniversary of the October Revolution published.

14 Soviet-Pakistan trade agreements concluded in Moscow.

Soviet-North Korean convention on the regulation of border questions signed in Pyongyang.

Mikoyan receives Chairman of the Soviet-Finnish chamber of commerce S. A. Harim.

The Kuibyshev Hydroelectric Power Station with a capacity of 2.1 million kilowatts begins full-scale operations in Zhigulevsk.

Fourteenth Soviet-Afghan conference on quarantine and plant protection opens in Moscow.

Report published of signing of Soviet-Austrian trade agreement for 1958—60 in Vienna.

15 Report published of arrival in Moscow of delegation of the Cairo municipality.

First plenary session of the organizing committee of the Union of Artists of the RSFSR ends in Moscow.

Pakistan trade delegation leaves Moscow for home.

International conference of biochemists attended by Soviet representatives begins in Tokyo.

Bulgarian government delegation headed by Chairman of the Bulgarian Council of Ministers Anton Yugov arrives in Moscow from Ulan-Bator en route for home.

Finnish Communist Party delegation arrives in Moscow.

16 Mongolian trade delegation arrives in Moscow.

Conference on problems of cotton growing opens in Tashkent.

Decree of the Presidium of the Supreme Soviet of the USSR on the convocation of an anniversary session of the Supreme Soviet of the USSR on November 6 in Moscow published.

Group of French writers including Louis Aragon arrives in Moscow.

Party Central Committee's letters to the socialist parties of Great Britain and Norway published.

17 Party Central Committee's letters to the socialist parties of France, Italy, West Germany, Denmark, Belgium, and Holland published.

Communiqué on Soviet-Czech talks on cultural cooperation published.

TASS refutation of reports of Soviet naval bases near the Syrian border published.

North Korean delegation arrives in Moscow for talks on cultural cooperation.

Zhukov arrives in Tirana from Yugoslavia.

Bulgarian government delegation leaves Moscow for home.

Conference of leading RSFSR legal figures opens in Moscow.

18 Report published of stay of Lebanese medical delegation in the USSR.

Bulganin receives Burmese Ambassador U Chin.

Soviet delegation headed by Deputy Minister of Culture S. V. Kaftanov leaves Moscow for Egypt.

19 Ambassador to Poland P. A. Abrasimov presents his credentials to Chairman of the Polish State Council A. Zawadzki.

Agreement on Soviet-Egyptian cultural cooperation signed in Cairo.

Supreme Soviet delegation returns to Moscow from Peiping.

TASS statement on the situation in the Near and Middle East published.

Bulganin's letter to Japanese Prime Minister N. Kishi on the first anniversary of the joint declaration normalizing Soviet-Japanese relations published.

20 Exchange of notes between Bulganin and Kishi on disarmament and nuclear weapon tests published.

Conference of the World Health Organization ends in Moscow.

Soviet Intourist delegation leaves Moscow for the US.

21 Soviet-North Korean talks on cultural cooperation end in Moscow.

Voroshilov receives the Iranian Ambassador.

22 Voroshilov receives delegation of the Cairo municipality.

Franco-Soviet friendship month begins in France.

23 Delegation of long-standing members of the Communist Party headed by M. B. Mitin leaves Moscow for Warsaw.

Letter of chairmen of the Soviet of the Union and Soviet of Nationalities to the chairmen of the Burmese Chamber of Deputies and Chamber of Nationalities on gradual disarmament published.

24 Gromyko's speech at UN General Assembly plenary session on October 22 on the need for urgent measures in the Middle East published.

Report of the General Secretary of the Central Committee of the Chinese Communist Party at the third extended plenary session of the Chinese Party Central Committee on September 23 on the need for improved working methods published by the Soviet press.

Delegation of long-standing members of the Communist Party headed by S. S. Dementev leaves Moscow for Albania.

Khrushchev receives Chairman of the Canadian Society for Cultural Relations with the Ukraine V. I. Svistunov.

25 Soviet trade delegation headed by Deputy Minister of Foreign Trade M. R. Kuzmin leaves Moscow for Belgrade.

Group of Syrian journalists arrives in Moscow.

Delegation of the Czech National Assembly headed by Deputy Chairman Iozef Valo arrives in Moscow.

All-union book, drawing, and poster exhibition opens in Moscow.

26 Zhukov leaves Tirana for home.

Decree of the Presidium of the Supreme Soviet amnestying Japanese fishermen accused of illegal fishing in Soviet territorial waters published.

Finnish Communist Party delegation leaves Moscow for home.

Report published on recent session of the Economic Commission of the Soviet of Nationalities in Moscow.

Soviet-Polish legal aid agreement over the stationing of Soviet troops in Poland signed in Warsaw.

27 Supreme Soviet delegation returns to Moscow from Peiping.

28 Gromyko's reply to Japanese newspaper correspondent on nuclear weapon tests published.

Report published of signing of Soviet-Syrian agreement on economic and technical cooperation.

Soviet-US talks on the development of mutual relations begin in Washington.

Group of long-standing members of the Communist Party leaves Moscow for Romania.

29 Gromyko's letter to Hammerskjöld proposing the creation of a permanent disarmament commission published.

Sino-Soviet Friendship Society founded in the USSR.

Anniversary session of the Academy of Medical Sciences held in Moscow.

Soviet-Romanian talks on cultural cooperation for 1958 end in Moscow.

Soviet agricultural delegation leaves Moscow for India.

30 Suslov receives Chairman of the Sudanese People's Democratic Party Ali Abdel Rahman.

31 Soviet-Hungarian talks on cultural cooperation end in Budapest.

Yugoslav Ambassador Velko Mikunovic holds reception for delegation of Yugoslav university professors visiting the USSR.

Changes and Appointments

3 P. A. Abrasimov appointed Ambassador to Poland.

23 Marshal K. K. Rokossovsky appointed Commander of the Transcaucasus Military District.

ERRATA

In the article "Soviet Participation in the Geophysical Year" by V. N. Petrov on page 3 of the September *Bulletin*, Dr. Sydney Chapman is erroneously listed as American. He is an **English** scientist. Line 5 on page 10 of the same article should read: "intends to release 125 **rockets** in all."

To the list of ministries in the article "The New Economic Setup" by G. A. Vvedensky on page 9 of the June *Bulletin*, the following should be added: **"Chemical Industry"** and **"Transportation Construction."**

In the article "The Soviet Seven-Year Plan" by G. A. Vvedensky of the October *Bulletin*, page 34, line 17 should read: "with a capacity of from **600,000** to **1,000,000** kilowatts."

The INSTITUTE also publishes the VESTNIK, a quarterly journal devoted to Soviet problems, as well as reviews and monographs in the various languages of the Soviet Union and the free world. Scholars interested in the INSTITUTE's publications are invited to write to:

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